NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND
INSTITUTE FOR TRANSPORTATION RESEARCH & EDUCATION

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Statewide Transportation Demand Management (TDM) Plan

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

FOREWORD BY SECRETARY LYNDO TIPPETT

We in North Carolina are not surprised that our state consistently ranks high nationwide for its livability. In fact, thousands of families are drawn to North Carolina each year as a result of the excellent business climate—not to mention our rich history, diverse culture and natural beauty. Our urban areas in particular continue to experience unprecedented growth as more and more people discover North Carolina's unique appeal.

While this growth brings many benefits, the increasing number of vehicles on our highways is threatening the quality of life in many regions. For many North Carolinians, driving to work is becoming increasingly difficult. Traffic congestion is also impacting our environment and the quality of the air we breathe. These concerns were the impetus behind the Ambient Air Quality Improvement Act, passed by the General Assembly in 1999. The legislation requires the state to develop a plan to reduce vehicle emissions resulting from job-related travel.

To jumpstart this plan and to ensure that we sustain our high quality of life, Gov. Easley set an ambitious goal in January 2003 to reduce job-related travel statewide by 25 percent by 2009. To lead this endeavor, he appointed a panel to focus on developing a statewide travel demand management (TDM) plan to increase commuting options for workers in both the private sector and public sectors. The panel, under the leadership of the N.C. Department of Transportation, took this charge to heart and developed a comprehensive TDM program for North Carolina and a three-year proposed action plan to incorporate TDM strategies throughout the state.

This report details the panel's findings and recommended strategies -- which range from working with the EPA to establish a 'Best Workplaces for Commuters' program to the creation of a statewide Office of Commuter Assistance. Such strategies represent a new approach to improving mobility for commuters. Gov. Easley and I thank the panel members for their efforts—and for leading the way for improved mobility, less congestion and cleaner air in North Carolina.

The recommendations of this panel offer citizens a range of choices and provide a way for us all to become actively involved in shaping our communities. I ask for your support of this plan, and to help us spread the momentum by developing TDM programs at the local level. In doing so, we will ensure that our rural and urban areas remain vibrant and attractive places where industry grows and families thrive. With your cooperation, TDM will be an important part of the future of our state and Gov. Easley's vision of *One North Carolina*.

TDM Mission Statement

To provide citizens of North Carolina specific opportunities and strategies for improving sustainable economic growth and quality of life through reduced transportation congestion, expanded mobility options, improved air quality and more efficient use of scarce resources.

- Adopted by the TDM panel on January 2003

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1.0 STUDY OVERVIEW

The North Carolina Department of Transportation and Parsons Brinckerhoff completed a statewide Transportation Demand Management Plan and program of work in the spring of 2003 and suggested improvements to the existing state program efforts during the following summer. Parsons Brinckerhoff, NCDOT and the TDM Panel that assisted in the study, saw this less as another "shelf document" and more as an opportunity for the development of a series of guiding principles. The NCDOT and its partners, DENR and others would have the opportunity to move the state toward programmatic change with an effective process and results to address many of the requirements of Senate Bill 953, the Ambient Air Quality Improvement Act of 1999.

The study team wanted a plan and program that would include leadership and improved program management, reinvigorated ridesharing/TDM programs, a more results-oriented program of work and a marketing framework that incorporated what was learned throughout the study process.

Parsons Brinckerhoff recommended a study process focused on the goals and expectations defined in Senate Bill 953 and encouraged the formation of an internal leadership team spearheaded by NCDOT and supported by a Panel composed of political, technical, development, marketing and government representatives across the state. The Panel would support NCDOT and the consultant team, providing guidance, leadership, dialogue and direction. Specific input would be provided on items such as program mission, work planning, implementation, guiding principles and marketing strategies.

The initial phase of work involved a fact-finding effort, completed in partnership with ITRE, to create a baseline of data and similar information about each of the ridesharing/TDM programs. This was an opportunity to inventory statewide efforts and in some cases "compare and contrast" program efforts currently underway. The product was a summary of results and complete notebook featuring the highlights of each program's efforts.

In addition, the program managers defined in their own words, critical components, accomplishments, major successes and other key information concerning their programs. This information was very important as the consultant team also examined other TDM programs across the country, compared the North Carolina programs various efforts and evaluated individual program efforts such as financials, staff size, organizational structure and program accomplishments.

Upon completion of these initial interviews, preliminary ideas for the SWOT interviews and analysis were developed. A framework for the approach was developed to include a cross-section of representation beyond existing markets. Because the SWOT represented such an important piece of "field" data and information for the study, it was critical to select a cross-section of stakeholders representing clients, board members, political representation and others.

As the acronym "SWOT" suggests, the SWOT analysis would offer feedback concerning existing TDM/ridesharing programs and the characteristics as described by their various

audiences. These sessions were also opportunities to discuss NCDOT's program expectations and through the study, discuss TDM's progress statewide, its performance and the results of various program efforts. Key stakeholders, policy representatives, decision-makers and of course, the program representatives themselves, had an opportunity to learn more about their programs, their effectiveness and any steps for improvement.

In combination, the ITRE baseline information and SWOT interviews and analysis results formed a solid foundation for assessing the progress of ridesharing/TDM programs. After addressing issues related to their strengths, weaknesses and improved program opportunities, including a look at potential projects in Asheville and Hickory, the consultants provided an overall assessment of steps necessary to improve existing TDM programs, including those focused specifically on the reduction of VMT and NOx as specified in Senate Bill 953.

Based on an overall assessment of each local program and an evaluation of comparable program efforts in locations such as California, Washington, Maryland, Florida, Connecticut and Iowa, a series of "Guidelines" were developed for NCDOT.

The "Guidelines" addressed NCDOT's leadership, the need for basic program improvement, "tools" such as mission statement, program goals and objectives, the need for demonstrating the value of TDM in order to encourage participation and political support, measuring performance and other key issues. With specific "how to" information and examples referenced in the Appendices of the report, a menu of choices was provided for how to improve the existing TDM efforts. Armed with this information, it would be possible to prioritize next steps for implementation.

The consultant, NCDOT and Panel were able to further refine the "Guidelines" so that realistic choices for implementation could be coupled with changes to timetables for funding and marketing. The earliest look at marketing included an overall marketing framework, the development of a broader marketing program and a summary marketing orientation from the SWOT analysis.

The final piece of work included a three-year proposed TDM Action Plan, which summarized the most critical pieces of work from the "Guidelines" document and prioritized the efforts. This would formulate the work plan for NCDOT and its Office of Commuter Assistance in the upcoming three years.

2.0 WHY TRANSPORTATION DEMAND MANAGEMENT? A PERSPECTIVE

Transportation demand management (TDM) is a phrase applied to a number of strategies intended to encourage the use of alternatives to driving alone, increasing the efficiency of the transportation system by focusing on travel demand instead of supply. Most TDM strategies deal with the modification of travel behaviors, maximizing the people-moving capability of the transportation system and usually focusing on trip-making, time of travel or the accommodation of people through fewer trips.

Transportation Demand Management strategies, when packaged effectively, can address a variety of transportation problems and provide a variety of economic, social and environmental benefits. The earliest TDM successes were accomplished through carpooling beginning during World War II.

Todd Litman, of the Victoria Transportation Institute, has written dozens and dozens of articles and essays about TDM and its effectiveness. What makes Litman's work and his position about TDM so compelling is his passion for successful implementation. Litman truly believes that TDM is the "next big thing" in transportation.

To Litman, the next major breakthrough in transportation will be one that effectively manages existing resources, resulting in the more efficient use of services and infrastructure already in place. TDM offers that capability.

In more and more communities across the country, TDM is becoming the mechanism by which businesses and community leadership, government and citizens, partner to develop effective transportation solutions. Sometimes, these solutions are in response to overwhelming congestion. Sometimes, environmental issues, such as air quality, have been the motivating factor. But in nearly all cases, the desire for increased mobility has produced new interest in TDM.

2.1 North Carolina Interests in TDM

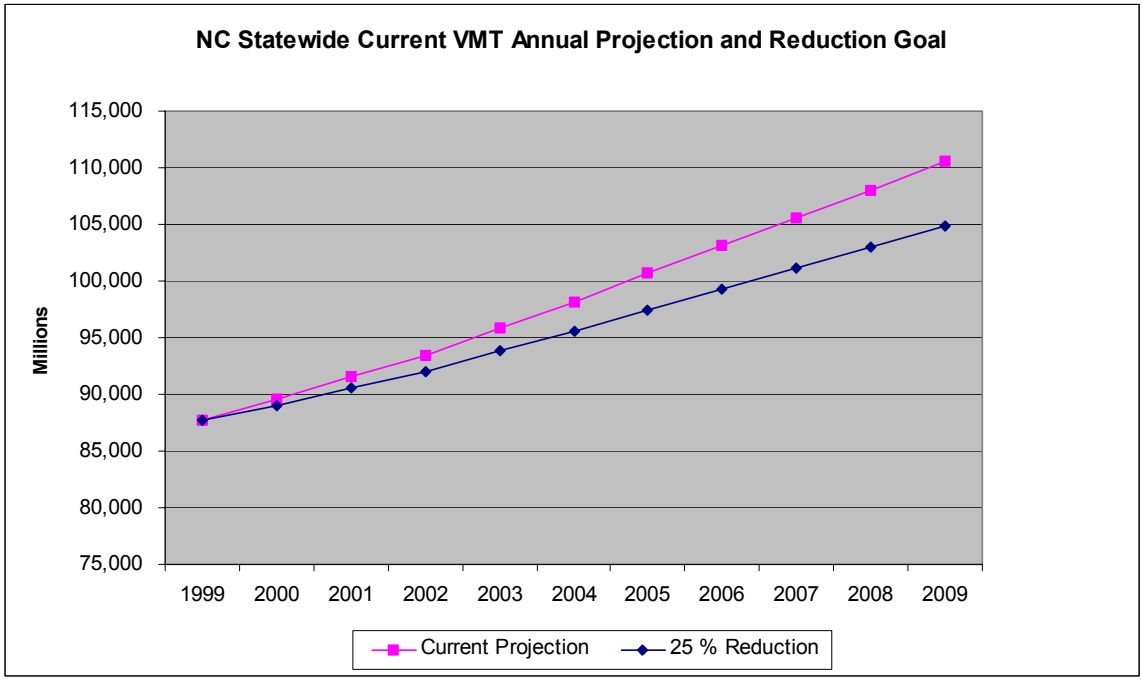
In North Carolina, the NCDOT and its Public Transportation Division, were motivated by the provisions of the Ambient Air Quality Improvement Act of 1999, Senate Bill 953, to address growing concerns over ground level ozone pollution from motor vehicles and the need to deal with increasing vehicle miles traveled (VMT) and NOx. The copy of the Senate Bill 953 is included in **Appendix A**. The NCDOT believed that TDM was one way to deal with the requirements of the Senate Bill. **Figure 1** shows that North Carolina has a statewide goal of reducing VMT by 25 percent (5.7 Billion VMT) by 2009.

While communities across the state had been practicing TDM and ridesharing for some number of years, little progress had been made at significantly reducing vehicle miles traveled, and air pollution-related problems were continuing to mount, especially in the urban areas and surrounding regions.

To initiate an analysis of the key problems and an effective means of what TDM-steps might be taken to address them, NCDOT asked a cross-section of leaders from across

the state to join a working group, called a TDM Panel, to guide a statewide TDM study. The Panel membership was created by NCDOT under the direction of the Governor.

Figure 1: Statewide VMT Reduction Goal of 25% By 2009

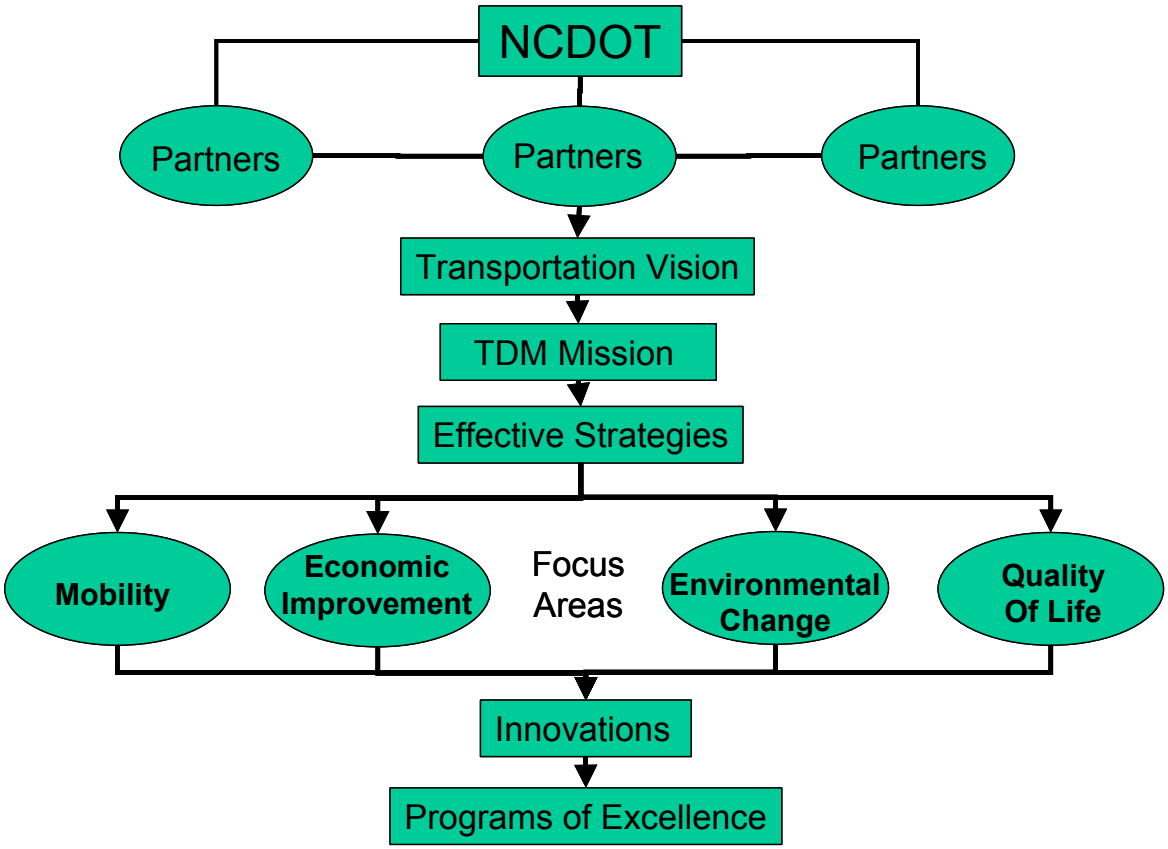


2.2 Leadership with a Purpose

The most successful TDM programs across the country are those with strong, defined leadership and enthusiastic, energetic champions at the helm. A visionary and innovative leader can arrange, facilitate, develop and informally coerce the necessary players into development of effective plans and programs. In addition, policies and programs can be created to support a well-defined TDM vision.

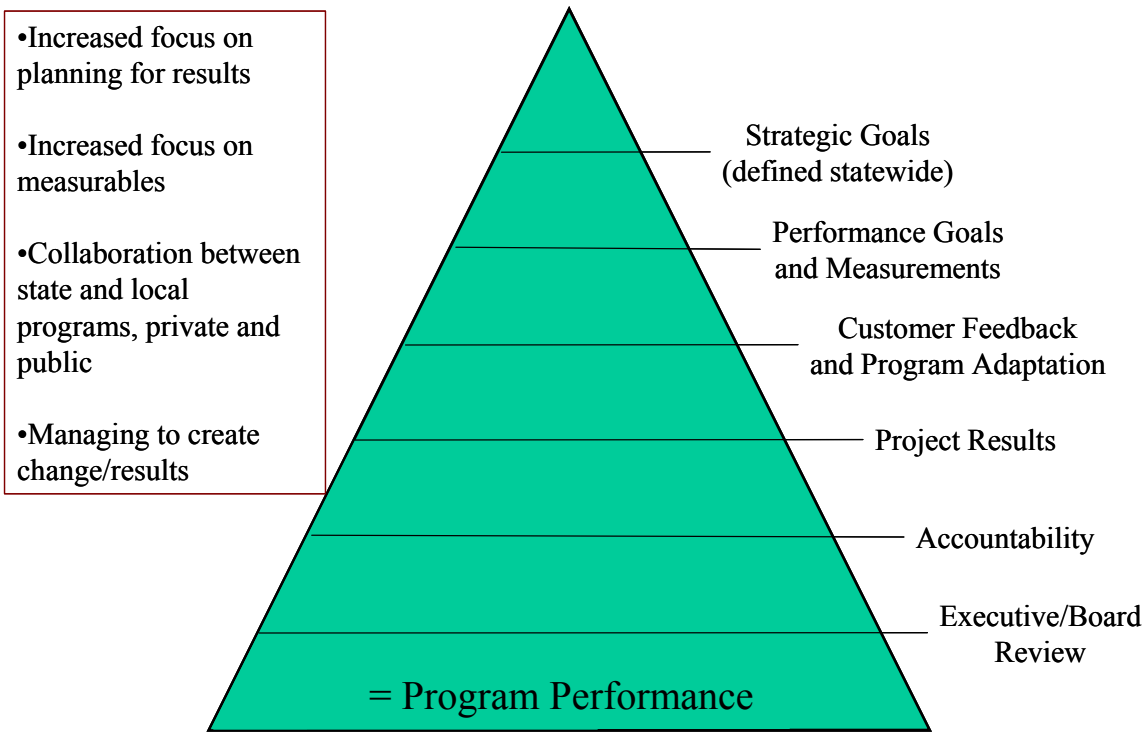
In the case of the NCDOT Statewide TDM Plan, it was important to create the leadership team (both champion and Panel) and then develop ideas for a mission and vision. New, overall program guidance, established first through a mission statement would (1) help establish an overall program direction (for a future Office of Commuter Assistance), (2) lend formality and direction to a statewide effort, (3) give a sense of purpose and defined need to the program, and (4) aid NCDOT in its assessment of future program outcomes. In addition, NCDOT could begin to link individual TDM/ridesharing program missions to its own, adjusting various program purposes and monitoring goals and objectives. This would be especially important as program performance goals were developed and funding decisions were formally linked to performance. The multi-dimensional plan was described as follows:

Figure 2: NCDOT/ TDM Program Structure



To begin to define and document the new program direction, a draft mission statement was prepared for NCDOT. The vision for the program, was introduced to the Panel and NCDOT staff, describing new roles, relationships and focus areas for the program (see **Figure 2**). These tools began to give definition to the program and added a strategic purpose for TDM. In addition, a Paradigm for Commuter Trip Management (see **Figure 3**) was developed which clearly illustrated steps required for development of a successful statewide program. Strategic goals, performance-based programming, customer feedback, project results, accountability, and an environment for continuous review were combined to produce a model for improved program results.

Figure 3: The Paradigm for Commuter Trip Management - Steps for a Successful Statewide TDM Program



2.3 Acting Now

Senate Bill 953 placed NCDOT squarely in a leadership role for improving Transportation Demand Management efforts in North Carolina. In partnership with the Departments of Administration and Environmental and Natural Resources, the Department was seeking ways to address TDM and effectively reduce NOx and VMT (vehicle miles traveled). The 25% reduction goal specified in Senate Bill 953 was aggressive, and to address this goal, a number of ideas needed to be considered to accelerate the planning and advocacy already underway.

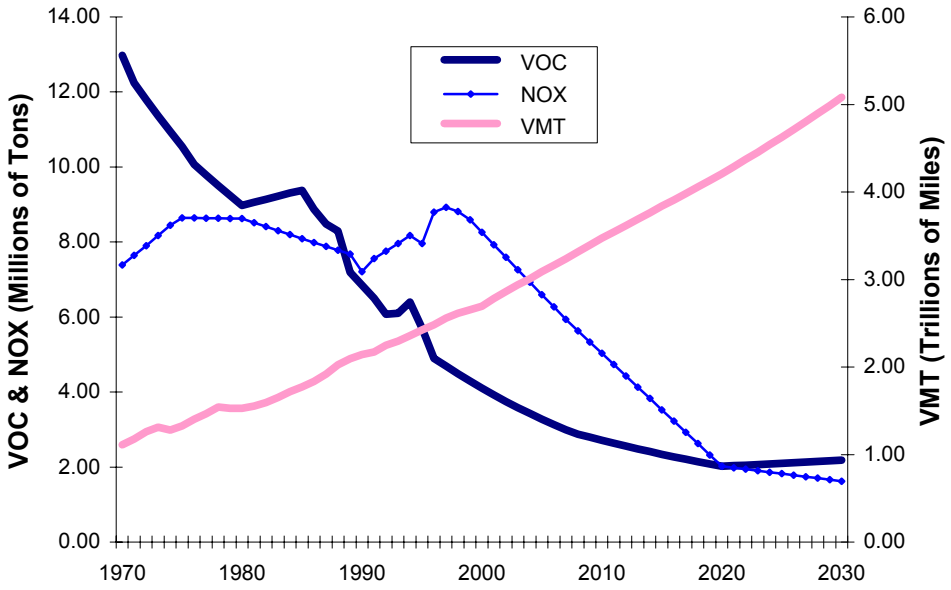
To begin, NCDOT wanted to focus on a series of congestion-reducing initiatives. Re-examination of the existing programs across the state, determination of levels of effectiveness, looking at the need to meet broader state goals and re-invigorating an older state government program for state employee TDM/ridesharing could produce a number of immediate results. Looking at innovation, incentives and more employer-focused programs was another way of strengthening program efforts and increasing impacts.

There were a number of reasons for choosing TDM as the mobility management tool for North Carolina at the current time.

1. Congestion has continued to mount, especially in the urban areas/regions and travel-related delays are increasing. **Figure 4** shows comparable national figures that indicate that we are driving twice as many miles each year compared to10 years ago.

   Since 1970, aggregate emissions traditionally associated with vehicles have significantly decreased (with the exception of NOx) even as vehicle miles traveled have increased by approximately 149%. NOx emissions increased between 1970 and 1999 by 16%, due mainly to emissions from light-duty trucks and heavy-duty vehicles. However, as future trends show, vehicle travel is having a smaller and smaller impact on emissions as a result of stricter engine and fuel standards, even with additional growth in VMT.

Figure 4: National Vehicle Miles Traveled (VMT) vs. Vehicle Emissions



Source: Statement of Senator Bob Smith, Environment & Public Works Committee Hearing on Transportation & Air Quality, July 30, 2002

2. Rising NOx, through its relationship to ozone, is directly responsible for the rising levels of asthma and other respiratory diseases nationally. Closer to home, nearly 30% of our North Carolina 6th graders suffer from asthma or other respiratory ailments, which are exacerbated by ozone.

Asheville youth has asthma

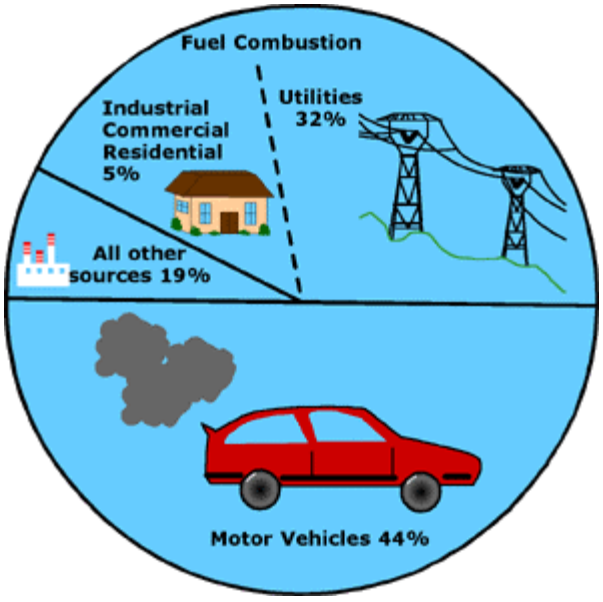
On days when air pollution clouds the view from his home in Murphy, Jeffrey can't play outside. Hear his mother Ronda Robberson explain how dirty air makes it harder for Jeffrey to breathe...

Degraded air quality makes it impossible for Jeffrey Robberson to play basketball.

Source: http://www.ibiblio.org/ncair/

High ozone levels in our air are now a documentable health hazard; **Figure 5** illustrates that auto emissions remain the largest source of NOx in the atmosphere.

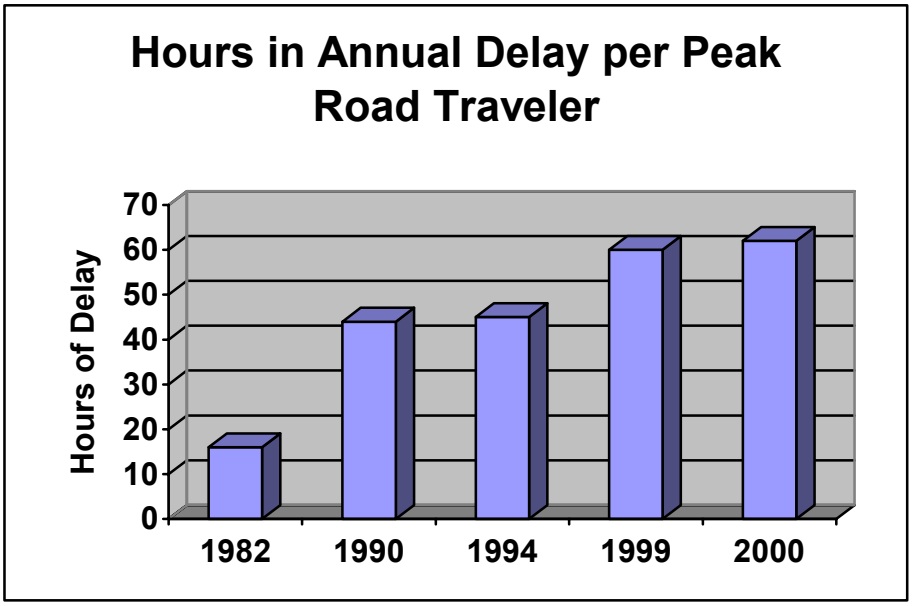
Figure 5: Sources of NOx



Source: http://www.ibiblio.org/ncair/index.php?page=ozone

3. Other mobility trends of concern relate to hours of delay, again associated with increased congestion. **Figure 6** shows that according to the 2002 Urban Mobility report from TTI, the average annual delay per peak road traveler climbed from 16 hours in 1982 to 62 hours in 2000 and delay in the same period quadrupled in areas with less than one million people.

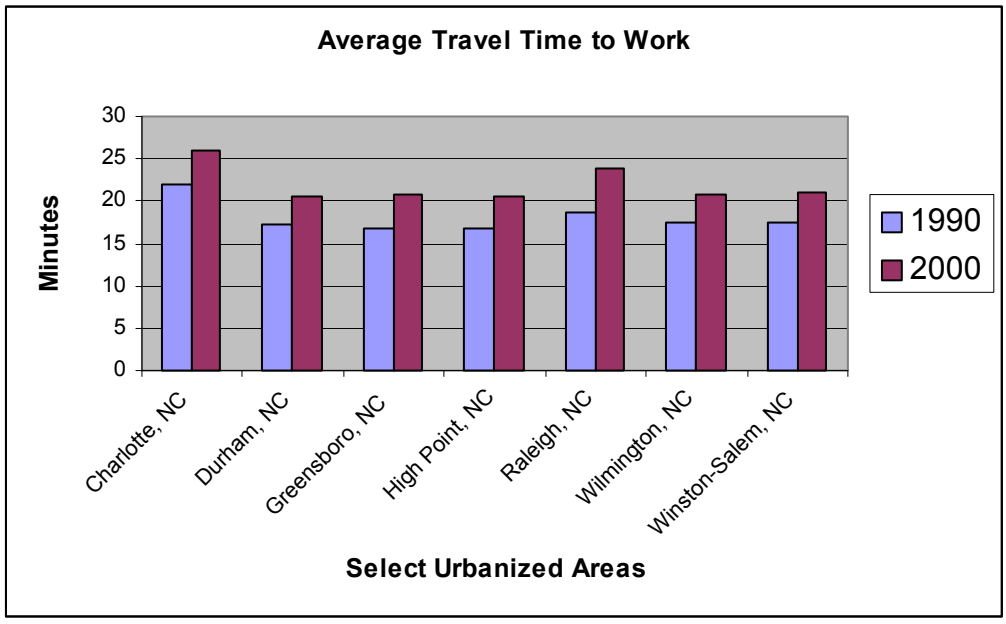
Figure 6: Hours of Delay



Source: ITT 2002 Urban Mobility Study

4. **Figure 7** shows that the three largest urban areas in North Carolina continue to face increases in commute-related delays adding to congested related delays and aggravating air quality. Significant increases in commuting times during the last decade occurred primarily as a result of the growth in vehicle miles traveled (VMT).

Figure 7: Average Travel Time to Work



Source: US Census

5. While road improvements have impacted congestion and curbed some air quality issues by allowing traffic to move along, travel time statistics continue to indicate increases. Nationally, travel time grew at about one-fourth to one-third as fast in areas where traffic volumes grew when roads were added. In other words, we cannot continue to rely only on building our way out of congestion and expecting those solutions to "solve" mobility or air quality problems.

3.0 SWOT ANALYSIS FOR STATEWIDE TDM PROGRAMS

During January 2003, a series of interviews were held with key stakeholders, representing clients, board members and others from the various ridesharing and TDM programs across the state. The interviews provided information in addition to that already provided by the TDM coordinators themselves who were interviewed in the Fall of 2002 by ITRE as part of the initial evaluation of each existing program.

The results of this evaluation are summarized in this section of the report. A list of programs reviewed is provided below. The actual questionnaires from the interviews are in **Appendix B** and the list of participants is shown in **Appendix C** of this report.

Existing Programs
Smart Commute
Triangle Transit Authority
State Government Public Transportation Division Ridesharing Program
City of Wilmington
State Government Public Transportation Division Rural Jobs Access Program
Piedmont Authority for Regional Transportation (PART)
Programs under consideration
City of Asheville
City of Hickory

3.1 Existing Programs

3.1.1 SMARTCOMMUTE @ RTP

System Name	SmartCommute@RTP
Contact Information	Ms. Crystal S. Bunch Travel Demand Management Coordinator SmartCommute@RTP Research Triangle Foundation 2 Hanes Drive PO Box 12255 Research Triangle Park, NC 27709 Phone: 919.549.8181; Fax: 919.549.2846 Email: bunch@rtp.org
Year Formed and Brief History	Started in February 1999; hired ½ time person in fiscal year 2001 and full time person in fiscal year 2002
Geographic Service Area	Major employers within and adjacent to the Research Triangle Park
Services Delivered	Employer based programs; service provider enhancements; preferred parking; emergency ride home; transit subsidy; on site transit sales; telecommuting; vanpooling through Triangle Transit Authority
Annual Budget	Fiscal Year 2003 $80,500 funded by Durham and Wake County Research and Production Service District
Successes	2002 SmartCommute Awards Luncheon on October 4, 2002; development of website; completion of phases 1 and 2 initiatives and beginning work on phase 3; annual survey of employees;
Website	www.smartcommute.org
Mission	Provide information, coordinate support and resources to enhance and promote alternative commuting practices to proactively confront travel demand and environmental issues facing companies within Research Triangle Park.

The SMARTCOMMUTE program received “high marks” from the stakeholders who participated in the interviews. In general, the program was perceived as extremely proactive, and it is described as the appropriate forum for meeting the needs of the companies it represents.

The full-time TDM Coordinator is viewed as the biggest resource of the current effort. Staff is energetic and dedicated and credited with the success of current marketing efforts. All stakeholders viewed the brand name of "SMARTCOMMUTE" as an asset to the successful marketing of the TDM initiative.

When asked to describe three major accomplishments, those were summarized as (1) the first annual SMART COMMUTE awards program for companies, (2) generalized marketing activities, and (3) the increased participation of RTP companies in the program.

Strengths

- In general, those interviewed believe that the SMARTCOMMUTE program capitalizes on the Triangle's interest in commuting, and perhaps the previous problems with I-40 and other congestion-related locations. While they could not cite exact evidence of how this was accomplished, they believed that it was done through marketing.

- The telecommuting program is viewed as a major success, with 7% of the RTP employees participating. This is one of the strongest elements of the SMARTCOMMUTE program.

- The SMARTCOMMUTE program facilitates information-sharing between companies. Through regular meetings and direct working sessions and problem-solving efforts, the TMA meets the needs of its participating companies.

- The Durham County Trip Reduction Ordinance is viewed as a valuable, but under-utilized tool. The Ordinance needs to be more effectively marketed, more effectively used. Emissions results need to be marketed as well. The "natural" results between RTP companies and teleworking and environmental linkages need to be marketed.

Weaknesses

- There is limited transit service to the RTP, and existing services are not convenient enough to attract the choice rider that the Park employees represent. Travel time savings are not competitive to driving; services are not oriented to the needs or schedules of Park employees.

- Companies need to share their "lessons learned" and devise a TDM agenda and/or priorities plan for immediate implementation (with NCDOT and or others involved).

- There are conflicting goals between organizations representing the Park's transportation agenda. Who speaks for the Park when it comes to "congestion management"?

- There is an interest in having this program be more results-oriented, beginning with emissions information. Other sorts of statistics should also be monitored.

- The interest in the Commute Trip Reduction Ordinance also raises issues related to transportation and land use. Should the Park look for mechanisms that have more "teeth"?

Opportunities

- The Program is beginning to track new statistics and is interested in working with its employers to do so.

- From a marketing perspective, the Park never envisioned itself in any sort of "savior" role relative to air quality or congestion, but it is certainly willing to play a management role.

- Employers feel sense of responsibility and success with program efforts to date.

Threats

- Reductions in force have reduced what was once a major emphasis in TDM strategies and programs.

- Elected officials may also be somewhat indifferent to the air quality requirements, not yet realizing the "implications" or realizing the "realities" associated with Senate Bill 953. There needs to be some other way to orient key decision-makers.

- The RTP development pattern is one of lower density and plentiful parking. This may need to be revisited to make TDM-based decisions work (EPA example).

- Streets have not been conducive to the use of alternatives such as bicycles.

- There is worsening air quality and increasing congestion---particularly in locations such as I-40.

- Other issues that the stakeholders wanted to be sure were communicated included the (1) need for an expanded version of "best practices" that could be used beyond the RTP. There was the suggestion for adoption of the (2) Wake County version of the Commute Trip Reduction Ordinance and the (3) consolidation of the CAMPO and DCHC organizations for a "single voice" in regional transportation.

3.1.2 Triangle Transit Authority

System Name	Triangle Transit Authority
Contact Information	Mr. John Tallmadge Commuter Resources Interim Manager Triangle Transit Authority PO Box 13787 *Research Triangle Park, NC 27709* Phone: 919.485.7430, Fax: 919.485.7441 Email: jtallmadge@ridetta.org
Year Formed and Brief History	*1980 was formed as part of the National Ridesharing Demonstration Project as the Triangle area program located in the Triangle J Council of Government; Vanpool Program started in 1985; TTA was chartered on December 1, 1989 and ridesharing / vanpooling was the first service offered in 1991;*
Geographic Service Area	Cities: Raleigh, Cary, Durham, Chapel Hill *Counties: Wake, Durham, Orange and surrounding counties*
Services Delivered	Vanpool Matching and Vehicles (employers subsidizing) Guaranteed Ride Home Preferential Parking Employer based Commuter Benefits Bike racks on buses in region Telecommuting Compressed work week / staggered work hours UPass program with NC State University *Transit Information*
Annual Budget	Administrative Budget: $484,751 FY 03 ($242,375 from NCDOT PTD)
Successes	*Staff and manage Commute Trip Reduction program for Durham County; 47 vanpools operating in June 2002; integrated with transit services and provides marketing for all modes of transportation; lead in the procurement / implementation of a regional web-based trip planning application and web-based rideshare matching application*
Website	www.ridetta.org
Mission	To plan, facilitate, and promote, for the Greater Triangle Community, an affordable, customer-oriented public transportation network which provides mobility, promotes economic opportunities, and protects the environment.

The Triangle Transit Authority Program was characterized by those interviewed as providing vanpool information and related services and working with major employers throughout the region. The staff also markets transit services to companies and provides "lunch and learn" sessions to employers and employees. Significant staff time is devoted to the administration/review of the Durham County Trip Reduction plans submitted by those employers in Durham County.

In providing descriptions of major accomplishments of the TTA program, those interviewed described the administration of the Durham Ordinance and the employer assistance provided by the TTA staff in meeting the Ordinance requirements. The completion of the regional rail study (EIS) and the I-40 HOV Feasibility Study were also cited as major accomplishments.

In discussing ways that the program receives political attention or recognition, those interviewed stated that the TTA Board is composed of a number of elected officials and that they convey TTA's various activities and priorities to other elected officials. The ridesharing/TDM work was not specifically mentioned.

There seems to be a good relationship with local traffic reporter Mark Roberts who was described as frequently mentioning TTA and the commute alternatives sponsored by their various programs.

Strengths

- The provision of vanpool and ridematching services have been important service priorities for TTA. There is a planned implementation of an on-line matching service in the near future.

- There is good staff leadership and strong staff/Board relationships at this organization, although the relationships do not reflect specifically on the ridesharing and TDM programs.

- Broader regional cooperation has been illustrated through the work of TTA on its regional rail project and through such projects as the Mayors Transportation Alliance.

Weaknesses

- The dominant work activity for the program has been the planning for the regional rail project.

- The existing transit services are not convenient enough to attract the choice rider, especially those from the Research Triangle Park. Travel time savings for alternatives as they currently exist are not competitive to the single occupant driving public.

- There are confusing connections between the TTA local transit operations that further discourage transit usage in the region.

- TTA does not operate services in the Research Triangle Park.

Opportunities

- There is interest in some sort of merger or integration of transit services in the Triangle Region.

- Wake County has an interest in a Trip Reduction Ordinance.

- There is a growing interest in the relationship between land use and transportation. The region is facing continued growth and problems with a number of related issues and "transportation solutions" could be the meaningful answers.

Threats

- There are increasing costs associated with the provision of public transportation services in the (region) (state).

- Potential funding crises at all levels of government have a negative impact on TDM and transit initiatives.

- Indifference on the part of elected officials and citizens in meeting the air quality and related goals may negatively impact the Triangle's quality of life and economic "position".

- There is a lack of unified leadership for the region concerning this subject (TDM amd related matters). Who speaks for TDM?

- Continuing on a path of predominantly highway construction only reduces the need for and opportunity for TDM's success.

- There is plentiful parking within the Research Triangle Park.

- Streets within the Triangle have not been designed in such a way as to be conducive to bicycle commuting.

- In addition to these issues, there are the parallel issues of worsening air quality and increasing congestion in the region. I-40's traffic has been particularly problematic.

- The stakeholders involved in this discussion and these interviews suggested more aggressive employer/employee education concerning the benefits of TDM measures and better information describing what is really important to commuters in selecting their travel choices.

3.1.3 State Government Public Transportation Division Ridesharing Program

System Name	Public Transportation Division Ridesharing Program
Contact Information	Ms. Tamra Shaw Transportation Planner Public Transportation Division NC Department of Transportation 1550 Mail Service Center Raleigh, NC 27699-1550 Phone: 919.733.4713 x 238, Fax: 919.733.1391 Email: tshaw@dot.state.nc.us
Year Formed and Brief History	Late 1970s received an FHWA National Ridesharing Demonstration Project Grant and began programs in the three major metropolitan areas of the state (one program in the Triangle (TJCOG), one program in Charlotte (CDOT) and three in the Triad (Greensboro, High Point, Winston-Salem); Currently, NCDOT–PTD supports two types of TDM programs: administrative (pays 50% of administrative support for the programs in Charlotte, Triad and Triangle regions) and start up (Wilmington);
Geographic Service Area	State of North Carolina, primarily focused on major metropolitan regions
Services Delivered	Funding Technical Support Planning
Annual Budget	FY03 $995,826 (state funds $497,913)
Successes	One of the first programs in the country; Technology funding for web based applications;
Website	http://www.ncdot.org/transit/transitnet/
Mission	It is the mission of the Public Transportation Division, in partnership with other public and private entities to support and promote the availability of high-quality public transportation services and partnerships throughout the state by delivering funding, technical assistance and leadership.

NCDOT's role in ridesharing and TDM activities is currently focused primarily on administration and management of the programs that exist locally. Technical assistance has been provided through direct support and consultant contracts.

The Triangle Transit Authority provides vans for vanpooling to the NCDOT offices, and NCDOT has an extensive flextime program, but flexible scheduling is not broadly promoted nor is it encouraged by all offices of state government.

NCDOT's TeleDOT (teleworking) program is being used by employees, but primarily on a part-time basis. Preferential parking is provided for those employees who carpool, but the program is promoted on a limited basis.

The Office of State Personnel/Department of Adminstration's pilot program for teleworking included more than 250 employees from several state agencies. There were several components of this program that could prove to be workable and expandable for a larger effort.

Overall, the public transportation services and TDM initiatives within state government continue to be a difficult product to sell and market to the senior management and higher ranking officials within Raleigh. Marketing TDM and commute benefits totally on the basis of convenience will continue to be a "difficult sale".

The major accomplishments of the state government program include (1) assisting with the development of the SMARTCOMMUTE Program, (2) assisting in the development of the Durham County Trip Reduction Ordinance, and (3) establishing the UNC-Chapel Hill TDM Program.

NCDOT has begun to think more strategically about the need for political and public support of its TDM efforts. Through its (1) support of the Department of Administration and State Personnel Teleworking program, and by examining the (2) need for Trip Reduction programs throughout the state, NCDOT is broadening its potential role in TDM. NCDOT is also encouraging the inclusion of TDM strategies in the Urban Area Long Range Plans.

Strengths

- The TDM initiative assists in the maximization of highway capacity during peak periods with a focus on moving people rather than moving vehicles.

- The NCDOT employees enjoy the teleworking program because of the convenience and time-saving aspects.

- NCDOT employees enjoy flextime because of the scheduling flexibility that results. The opportunity for a 4-day workweek reduces time spent commuting by 20%.

- There are estimated savings for state government in reduced office space requirements, equipment and associated costs, if the telework program can be successful, and then expanded. In 1996-97, the cost estimate was $21M if 1% of state employees began to telework.

- TDM programs have documentable health benefits and improvements to recruitment and retention goals. These are qualities that state government should “advertise”.

Weaknesses

- Many state managers do not support teleworking, flextime and other TDM initiatives, so only a limited number of state employees are participating.

- There is a poor understanding among state leadership of the benefits of TDM and public transportation.

- TDM strategies are not being incorporated into state policies, long range plans and similar initiatives.

- System upgrades may be needed to accomplish a telecommuting program.

- The provision of employee parking in downtown Raleigh that is so inexpensive and so readily available is a deterrent to employee participation in commuting alternatives.

Opportunities

- Expanding/resurrecting TDM programs to encourage interested employees and embrace others will begin to establish NCDOT and other departments of state government in a leadership role.

- There will be benefits to recruitment and retention and positive morale for state government as an employer, through this unique transportation program.

- There is an opportunity to partner for successful program efforts with TTA, SMART COMMUTE and the companies in the Research Triangle Park.

Threats

- Increasing parking costs for state employees could be negatively received unless the TDM “package” includes a number of convenient TDM alternatives.

- To make any initiative involving state employees successful, there will likely be a need to focus on multiple actions: the amount of time devoted to commuting, the resources “used” by traffic congestion (and therefore saved by the improvements), and the resulting savings that various departments will produce by participating in various programs such as teleworking, etc.

3.1.4 City of Wilmington

City of Wilmington

System Name	City of Wilmington
Contact Information	Ms. Lawless Bean Transportation Demand Management Coordinator Development Services / Transportation City of Wilmington PO Box 1810 305 Chestnut Street Wilmington, NC 28402-1810 Phone: 910.341.3258; Fax: 910.341.7801 Email: lawless.bean@ci.wilmington.nc.us
Year Formed	Program started in 2001 and a coordinator hired in early 2002
Geographic Service Area	City: Wilmington Counties: New Hanover and surrounding counties
Services Delivered	Input from an employer group and advisory board; working to define roles and the services to be delivered; interfacing with the rural jobs access initiative in New Hanover County; vanpools will be provided by the third party contractor already working in Wilmington;
Annual Budget	First Year $60,000
Successes	Planned and started operation of transit services for the UNC-Wilmington community and a shuttle service for Corning employees that was open to the public; produced a TDM video; developed an employer services brochure; created work priorities with the employer group; currently surveying 14,000 employees to ascertain services needed;
Website	
Mission	Establishing an on-going employer-based coalition that will define and implement TDM initiatives which will enhance and / or maintain the high quality of life for their employees and the community at large.

The Wilmington TDM program is employer-based. Its major success story with TDM began with the Corning shuttle, demonstrating a public/private partnership for transportation service involving the City, NCDOT, Corning and Wilmington Transit.

Currently, the employer transportation group is focusing on a park and ride project involving express bus service from Monkey Junction.

There is growing awareness within the community of the issues surrounding the land use and transportation "connection". New ordinances will require the provision of sidewalks with new construction, and there is possible interest in a Trip Reduction Ordinance similar to Durham County's.

In terms of accomplishments, the hiring of a full-time coordinator was viewed as important to all stakeholders interviewed. The coordinator has been as integral part of the Program's continued progress. The other items cited as accomplishments included the (1) activation of the Corning shuttle, (2) the operation of the Downtown Trolley, the (3) geocoding of the employee surveys, the planning for the Monkey Junction park and ride service, and (4) the expansion of the TDM employer group to iinclude additional employers.

To achieve political or public recognition, the program obtains media coverage of its special activities through activities like the launching of the Corning shuttle. The TDM coordinator periodically attends the WTA Board meetings, and there has been a video prepared produced for marketing the TDM program, but it has not yet been distributed/released.

Strengths

- The establishment of the full-time TDM coordinator position based on NCDOT funding, has helped focus program efforts and bring employer-based activities together with a defined purpose. As a result, there is a better understanding among the TDM employer committee members about their direction and what needs to be accomplished with their program.

- There is good cooperation between the WTA staff and the TDM Coordinator.

- There is an excellent GIS system that can be used for geo-coding and establishing employee trip origins/destinations.

- There is the possibility of purchasing ridematching software to assist in car and vanpool matching and the provision of transit services.

Weaknesses

- There is inadequate funding for both the transit and TDM programs, making it difficult to serve the needs identified by the employer groups and the community.

- Existing transit services are not convenient enough for the choice riders, resulting in the perception that the system is for the lower income citizens in the community.

- There is limited communication and marketing of the TDM effort.

- There has been poor cooperation between Wilmington and New Hanover County, complicating matters like the regional transportation initiative that could result in more services and more efficient services for the community.

Opportunities

- Consolidation of city and county transportation/transit services is under consideration and service improvements could be an outcome.

- There is increasing public concern over worsening traffic congestion and the possible impacts on Wilmington's quality of life.

- There are opportunities to coordinate with Brunswick and Pembroke Counties and to provide regional connections through improved services.

- There are opportunities to expand TDM and transit marketing in conjunction with WTA's adoption of a new logo and purchase of new buses.

- More employers are being added to the working group representing a broader group within which to "sell" TDM.

Threats

- The local government in Wilmington faces financial constraints that could impact TDM *and* transit funding.

- The loss of state funding could impact the TDM program.

- Turf-related issues could break-down the cooperation in several areas.

- There could be declining interest in TDM among the major employers for any number of reasons (economic changes, as an example).

- The shuttle service demonstration or the express bus service demonstration could fail.

- In addition to these items, Wilmington has several congestion "hot spots" that need to be monitored but no specific plans for addressing these locations or monitoring their problems has been planned. Castle Hayne Road is one of those problem areas.

- The ability to monitor the performance of the TDM program is also of concern. There should be "quantifiable" information for the program that can be reported to elected officials, employers and other key community stakeholders.

3.1.5 Rural Job Access

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

System Name	Public Transportation Division Rural Jobs Access Program
Contact Information	Mr. Charles Glover Assistant Director for CommunityTransportation Public Transportation Division NC Department of Transportation 1550 Mail Service Center Raleigh, NC 27699-1550 Phone: 919.733.4713 x 277, Fax: 919.733.1391 Email: cglover@dot.state.nc.us
Year Formed and Brief History	In April 1999, awarded a Job Access & Reverse Commute Grant from the Federal Transit Administration; focus is to support a statewide rural vanpool program and a subscription commuter service program;
Geographic Service Area	State of North Carolina, primarily focused on getting people in rural areas to work
Services Delivered	Vanpool Matching and Vehicles (employer subsidies) Guaranteed Ride Home Preferential Parking Employer based Commuter Benefits
Biannual Budget	$495,000 Job Access & Reverse Commute Grant from the Federal Transit Administration – matched with $495,000 from NCDOT Work First Employment Transportation Demonstration funds
Successes	9 vanpools in operation in Oct 2002; contract with 3rd party vanpool provider for vehicles and administration;
Website	http://www.ncdot.org/transit/transitnet/
Mission	It is the mission of the Public Transportation Division, in partnership with other public and private entities to support and promote the availability of high-quality public transportation services and partnerships throughout the state by delivering funding, technical assistance and leadership.

The focus of the Rural Job Access program is the provision of vans for vanpool services within areas of the state where traditional public transportation services do not currently exist, or in areas where the vanpool services can augment those services being provided by a traditional public transportation services provider. The program works alongside health and human service agencies and others to meet the needs of employers and their employees in counties with significant unemployment.

The Rural Job Access Program has been beneficial to the Soffe plants in Maxton and Lumberton. The program has also provided vans for the Tyco plant near Rocky Mount and Harnett County.

This program presents a good option for persons commuting long distances to rural employment sites. The vanpools generally serve work shifts more efficiently than rural transit (employees often arrive to work earlier and stay at work later than the bus schedule allows).

The major accomplishment of the program includes the (1) contracting with 2Plus for the provision of vans so that vehicles for pooling can be provided quickly to those employers/employees desiring to participate in vanpooling. 2Plus also provides the management, oversight, maintenance and operation of these vehicles.

By working locally with the Departments of Social Services, Employment Security Commissions and others, the program works to develop improved partnerships for the provision of transportation services in rural areas.

Strengths

- This program reduces the number of single occupant vehicles traveling to and from job sites, helping to control emissions and manage parking-related problems.

- The program provides an affordable transportation option for lower-income persons and those without cars or valid driver's licenses so that they can get to and from work.

- The program improves communications between agencies seeking jobs and those employers needing workers. The transportation "broker" provides a much-needed service.

- The 2Plus contract provides "peace of mind" for companies and agencies interested in the alternatives to driving and for those with employees who have no automobiles.

- The vanpooling alternative represents a dependable option for long-distance commuters, improving on-time performance and overall productivity.

- Vanpooling has been proven to be a stress-reducing, employee-favored benefit. With experience, the program can grow.

Weaknesses

- It is sometimes difficult to find the vanpool drivers with the required/acceptable driving record.

- Using drivers with poorer driving records raises insurance costs, which increases the vanpool program operation costs (to users and to NCDOT).

- Inadequate marketing materials (brochures, explanatory information) and inappropriately decaled vehicles may hamper the programs effectiveness and the total understanding of the program by those currently involved and those that could become involved.

- Poor communication of the program problems/successes within NCDOT, the Department of Health and Human Services and others involved limit the understanding of how the program works. Similarly, there may be a need to make adjustments to the program and all players need to assess the effort routinely.

Opportunities

- Improved awareness of the program by employers and agencies could increase the vanpool program use. There does not appear to be a strong marketing program.

- Use of existing vanpool participants in a peer-to-peer marketing approach would be another way to spread the word about success and market within the rural jobs community.

- The Rural Jobs Access Program should be linked to marketing initiatives in every city and town and every department where an active program "lives"…through the DSS's, through the transit systems. Perhaps a demonstration could begin in Wilmington, linking vanpooling to rural jobs access and WTA.

Threats

- The economic downturn has created fewer and fewer employment opportunities so the "natural" linkages for the jobs access may be limited. How can the "broker" (2Plus) be guaranteed a link to jobs and to the provider of jobs in each community?

- The loss of federal and state funding for Rural Jobs Access and related activities (TANF, TEA 21) may threaten the overall welfare-to-work emphasis/interest at the local levels.

- There is a continuing lack of DSS cooperation within many counties, and NCDOT cannot force agency participation. Without this support, the program loses its original intent and purpose.

3.1.6 Piedmont Authority for Regional Transportation (PART)

System Name	Piedmont Authority for Regional Transportation
Contact Information	David Morris Operations Manager Piedmont Authority for Regional Transportation 100 West 5th Street Winston-Salem, NC 27101 Phone: 336.727.2003, Fax: 336.748.3072 Email: davidm@partnc.org
Year Formed And Brief History	1980 was formed as part of the National Ridesharing Demonstration Project as one of three programs in the Triad. In 1982, the High Point and Greensboro programs were merged. Vanpool Program started in 1984. In January 1995, the Greensboro and Winston-Salem programs merged. With the formation of PART in 1998, the ridesharing vanpool program was the first service to be offered by PART in June 2000.
Geographic Service Area	Cities: Greensboro, High Point, Winston-Salem Counties: Guilford, Forsyth, Alamance, Rockingham, Davidson, Randolph and their surrounding counties
Services Delivered	Vanpool Matching and Vehicles Guaranteed Ride Home Preferential Parking / Free Vanpool Parking Employer based Commuter Benefits Bike racks on buses in region Shuttle service for construction sites Transit Information
Annual Budget	Administrative Budget: $305,704 FY 03 ($152,852 from NCDOT PTD)
Successes	Oldest vanpool program in NC; won 1985 Federal Highway Administrator's Award for Ridesharing; 58 vanpools operating in October 2002; integrated with transit services and provides marketing for all modes of transportation; first 511 implementation in NC (fall 2003);
Website	www.partnc.org
Mission	To enhance the quality of all forms of transportation for each of our citizens through efficient use and protection of our natural, economic and human resources.

PART is involved in the comprehensive provision of ridesharing and vanpooling and markets services throughout the region. Their vanpools are visible throughout the region and, the PART Express service to the Airport represents the first regional service of its kind in the area.

Vanpooling continues to be an integral part of the ridesharing program, although the number of vans in active operation as gone up and down over the last few years.

The major accomplishments of the PART program have focused on the (1) start up of the PART Express, (2) the new PART Connections (out-of-county medical trips) and, (3) the construction of a new regional passenger station at NC 68 and I-40. Completion of the high speed, intercity rail and Major Investment Studies for the region were also significant activities. Pursuit of the rental car surcharge to support PART was a critical activity, and there was continued progress in the coordination of planning performed by the local MPO's.

PART receives political and public recognition through the work of its Board. It is well represented by elected officials and member jurisdictions. Board members convey PART activities to other elected officials through peer-to-peer communications.

Media coverage of special events is good, such as the PART Express kick-off.

Strengths

- The political composition of the PART Board facilitates the buy-in and support of member jurisdictions.
- There is good leadership and a good working relationship with the staff and Board.
- Regional cooperation continues to increase.
- The rental car tax, as a funding source for transportation initiatives, is working with minimal political implications.

Weaknesses

- No transit services exist in the suburban areas.
- Existing transit services are not convenient enough to attract the choice riders.
- Vanpool services have received mixed reviews from the marketplace, resulting in up and down formation rates. The economy has not helped this situation.

Opportunities

- There is a growing awareness of the relationship between transportation and land use.

- PART has an increasing role in regional transportation planning and travel demand modeling.

- There is increased public awareness of worsening air quality and highway congestion in the region.

Threats

- There is a lack of public support for TDM/transit based on overall use/understanding of the program and key issues.

- Funding needs to be more permanent, and it will have to be greater to support major transit initiatives.

- There has been limited media coverage of PART's efforts and a stronger marketing and media program is needed to build the overall program.

- There has been a breakdown of regional cooperation resulting from "turf protection", and for the PART program to succeed, this turf-related battling needs to be resolved.

- In addition to the information described above, those interviewed described the need to have more qualitative information about TDM and the PART program. Only the vanpool program statistics seemed to be in the memory of most, and that information was not easily remembered by many of those interviewed.

- Savings from the various transportation initiatives would be an important fact to be known by local elected officials and PART Board members.

- Steps being taken by PART to remedy congestion should be specifically identified.

- It is important to continue the TDM program advocacy, but the program may need to be re-identified and it may need more support from elected officials.

3.2 Programs under consideration

3.2.1 City of Asheville

Prior to participation in this statewide TDM Plan effort, Asheville had not paid too much attention to TDM or the need to look at the VMT and air quality "numbers" as they relate to growth strategies and NOx. They had related most of their air quality and vehicle trip reduction strategies to their Smart Growth Planning, incorporating some important changes to recent zoning ordinance modifications and plans for mixed use developments.

At the current time, Asheville is using their "urban village" zoning classification and their neighborhood corridor district as mechanisms for dealing with the need to infill and "refill" select locations, encouraging certain kinds of development. Higher density, mixed use developments offer opportunities to reduce dependence on the automobile.

While there is no formally adopted air quality assessment, or policy to deal with air quality, several steps have been taken to assure a positive impact on traffic. Fewer

vehicle miles traveled is a goal. Improving the transit system is a goal. Transit and land use integration as described in the 2025 Plan should become a major goal for further public action.

The I-26 Connector project is going to present an opportunity for the community to "test" its ability to move traffic under a variety of conditions. TDM and public support for alternatives could be a part of this effort.

In the downtown area, there is business interest in the "traffic-related" issues. The scarcity of parking and parking management are important. How to deal with the issues that are important to the University and the Hospital, as major employers (and as businesses), would be important to next steps in transportation. If TDM could present strategies that would address these issues, this would be appealing to the community.

Asheville Transit System could do a number of things to address the priorities identified in Senate Bill 953. Steps might include (1) broadening coverage of the system, (2) maximizing service into select areas, and (3) improving/expanding services regionally. There is an interest in focusing on a variety of tools and services, but new funding would be required.

There is the belief that the public recognition of the transportation "predicament", including the air quality situation, is well understood in Asheville. An understanding of the solutions may not be so clearly understood. Possible solutions, including TDM programs, will need to be well defined in order to be well received by the community.

Innovative approaches are likely to be successful in Asheville. There was discussion of a fare-free transit system like in Chapel Hill, along with other measures to improve transportation system performance. Incentives were discussed along with their importance to TDM's success.

3.2.2 City of Hickory

The opportunities for program development in the Hickory area clearly lie with air quality and ozone reduction-related goals. TDM strategies could be part of the long-range planning currently being done by the Western Piedmont Council of Governments and by Catawba County, and the Early Action Compact would be an excellent "place" to begin to define TDM as a solution for air quality problems in the 4-county region.

Problems hampering Hickory's TDM program development in the past have included limited traffic congestion and limited peak hour problems that would serve as motivators for employer interest or motivators for community participation, a lack of large employers with parking, access or circulation problems, and a failed "first attempt" to launch vanpooling in the area.

Since air quality remains an issue, Hickory is willing to take another look at TDM programs, perhaps looking at incentives and ways to link TDM to development and "smart growth". There is an interest in linking the program to ridesharing services through their existing transportation program at the City. The City is interested in looking at a number of models for lowering VMT, especially where transit services can be improved through better planning. Alternative fuels, the use of school buses and improved signal timing are just a few possible improvements that the City is interested in exploring as part of TDM planning.

3.3 SWOT SUMMARY CONCLUSIONS

SMARTCOMMUTE @ RTP

- Employers Want TDM to Succeed
- CEO Participation has Disappeared
- Energetic Staff
- Accomplishments are Marketing-Related
- Increased Telecommuting is Greatest Behavior Change
- Limited Transit Services Hamper Choice Ridership
- Program Needs to Focus More on Results
- Durham Ordinance is Valuable but Underutilized
- RTP Development Pattern is "Anti-TDM"
- No Clear Transportation "Spokesperson" in RTP

Triangle Transit Authority (TTA)

- Transit Marketing to Employers is Significant Activity
- Vanpool & Ridematching are Traditional Strengths
- Little Growth in Vanpool Numbers
- Administration of Durham Ordinance is Major Effort
- TTA Board/Political Relationships are Strong
- Growing Awareness of Land Use/Transportation Linkages
- Lack of Public Understanding of TDM
- Continuing Preference for More Highways
- Little Focus in Meeting Air Quality Goals

Piedmont Authority for Regional Transportation (PART)

- Markets Vanpooling & Ridesharing in Triad Region
- Number of Vanpools has Fluctuated
- TDM Should be Elevated to Board Level
- Limited Transit Services Hamper Choice Ridership
- Growing Awareness of Land Use/Transportation Linkages
- Lack of Public Understanding of TDM
- Need to Quantify TDM Program Results

City of Wilmington

- Employer-Based Program with Some Successes
- Full-time TDM Coordinator has Focused Efforts
- Current Initiative is Express Bus/Park & Ride
- Limited Transit Services Hamper Choice Ridership
- Growing Awareness of Land Use/Transportation Linkages
- Limited TDM Communications/Marketing
- City/County Relations Threaten TDM Initiatives
- WTA's "New" Look Could Help TDM Program

City of Asheville

- Trip Reduction Strategies Tied to "Smart Growth"
- Growing Awareness of Land Use/Transportation Linkages
- Potential for Linking TDM to Zoning
- TDM Potential in Downtown and I-26 Connector
- Funding Needed to Expand Bus/TDM Services

City of Hickory

- TDM Strategies are in Long-Range Plan
- Potential for TDM as Part of Air Quality Actions
- TDM Strategies Could Appeal to Hospitals
- Lack of Employer Interest in TDM
- Growing Awareness of Land Use/Transportation Linkages

State Government

- Teleworking is Limited but has Appeal to Employees
- Flextime is Not Widely Promoted
- TDM Is a "Tough Sale" to State Employees
- Partnership Opportunities with TTA and RTP
- NCDOT Should Promote TDM Benefits to Leadership

Rural Job Access Program

- Serves Long-distance Commutes in Rural Areas
- Benefits Counties with High Unemployment
- Third-Party Operator Facilitates Vanpool Creation
- Integrates Employment & Transportation Objectives
- Need to Create Program Identity
- Need to Improve Marketing Efforts
- Need to Quantify Program Results

Overall SWOT Themes

- Limited Transit Services Hamper Choice Ridership
- Growing Awareness of Land Use/Transportation Linkages
- Lack of Understanding of TDM Benefits
- Need to Quantify TDM Program Results
- NC Program Focus is Support of Alternative Modes

4.0 GUIDELINES FOR DEVELOPING A TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM FOR NORTH CAROLINA

The SWOT analysis and stakeholder interviews provided information and feedback concerning the existing ridesharing programs in North Carolina. It was clear that more could be done to strengthen these programs and improve stakeholder understanding of TDM and various program efforts.

The North Carolina Department of Transportation (NCDOT) has an opportunity to build upon current ridesharing programs, broadening their efforts to include more than just planning and advocacy. Improving current programs will require more leadership and training and improvements that yield meaningful impacts to congestion and mobility across the state. The State will need to partner with DENR and others on programs that will positively impact air quality and vehicle trip reduction goals. To achieve significant results, there will need to be a new focus on program performance and accountability. Changes to marketing and specific program elements, such as vanpooling, can be expected.

Because commuters often make their travel decisions, choosing times, routes and modes based on what works for them, NCDOT and its ridesharing/TDM programs need to focus on improving commuter choices, benefits and incentives. The following "Guidelines" have been developed to illustrate a mix of actions that could be undertaken by NCDOT and the local programs in several areas to improve TDM statewide.

4.1 Establishing a Case for TDM: Goals, Objectives, and a Clear Mission

1. *NCDOT needs to develop a clear compelling body of evidence for the value of applying and carrying out TDM strategies.*

- The evidence is clear that commuters use carpooling, vanpooling, transit, alternate work hours, and other TDM strategies when these options meet their needs, usually measurable in terms of travel time and cost but also in terms of availability of travel modes.

- There are clear reasons for North Carolina commuters to use TDM strategies today. With rising gas prices and compelling air quality conditions in a number of communities, motivations are stronger than they were 30 years ago.

- Some commuters will use transit because it is their best choice; some use carpools because they gain convenience; and some use vanpools to save money.

- More such reasons to use TDM strategies can be created through development of high occupancy vehicle (HOV) lanes, increased transit service, land use planning that integrates transportation considerations, increased TDM services, and a wide range of strategies. When commuters believe they will be better off by using modes other than single occupant vehicles, they act accordingly.

- When employers conclude that it is in their self-interest to provide commute alternatives, they act accordingly. A number of best practices references are available nationally, but North Carolina needs to create its own reference guide for this sort of information.

- It will be essential for NCDOT and its partners to demonstrate the value of TDM and to create benefits for commuters.

2. *TDM needs a distinct identity tied to specific and prominent statewide goals and objectives.*

- To begin this effort, NCDOT worked with its TDM Panel to develop the mission statement for a TDM initiative, but this needs further refinement and the entire program needs an easily recognizable name. During the marketing portion of this study, the mission statement and name will be examined further, but NCDOT should consider an extensive plan for marketing all congestion-mitigating forms of transportation, promoting the programs and the achievements across the state.

- NCDOT should work to elevate the TDM initiative internally and externally, specifically integrating the program into all of its long-range planning and key program efforts.

3. NCDOT should develop a clear statement of the goals for commuter transportation (and for other trip purposes) that provide the framework within which TDM must operate.

- These goals need to consider mobility, air quality, energy, and related topics. The State's program should define outcomes that accomplish results that best meet the various needs.

- The three urban area programs, the rural program, and, perhaps other programs, should be covered by this broader framework. Targets should be established that each program can work toward, developing results that are in the State's interest. This should lead to new operating plans and budgets (work programs) for each involved organization.

- By having a clearer statewide set of objectives, the funding for each regional or local program can be sized appropriately to the investment needed.

4.2 Improved Management, New Initiatives and Targeted Activities

4. *NCDOT needs to develop an Office of Commuter Assistance, focusing on demand management techniques and TDM initiatives for North Carolina.*

- A Committee of the North Carolina Board of Transportation, similar to the Transit, Rail and Ferry Committee, needs to be established to look specifically at congestion, air quality and commuter issues.

- New air quality and VMT goals should be established for each urban area/ridesharing program in North Carolina. These goals should be developed through the local offices but coordinated with NCDOT, its new Office of Commuter Assistance and DENR. The new goals should be promoted and monitored by local policy-makers and decision-makers.

- Cooperatively, NCDOT and DENR should work with this Board Committee and the local ridesharing/TDM programs to make sure that new goals are met in conjunction with Senate Bill 953.

5. *A new position should be created to oversee the development of TDM initiatives statewide and to manage existing ridesharing/TDM programs funded by NCDOT, but more importantly to foster innovation and creativity in the areas of TDM and ridesharing across North Carolina. This position/person must be highly visible and able to work across senior leadership lines.*

- NCDOT should partner with DENR and other appropriate state departments to develop a leadership-based position that can meet the needs of DOT and provide leadership for existing local programs. (A comparable Washington State Transportation Demand Management program is described in **Appendix D** of this report.)

- This position should be entrepreneurial, focusing on training and creative solutions for the needs of the state and local programs. The goal should be creativity and innovation, not only administration.

- ITRE and/or consultants should work in conjunction with NCDOT to provide a pool of information to the State about TDM, developing the tools that will benefit each local program, moving them away from only “activities” and into innovation and solutions, encouraging more employer and developer action. Larger scale, best practices-type projects should be developed.

- NCDOT can work collaboratively through its lead staff to disseminate information about various programs and TDM tools on a routine basis. The existing quarterly TDM coordinator sessions should be continued and expanded to include the “partners” from DENR and other key state agencies. The development of TDM projects featuring new and improved TDM tools should be a goal of this effort.

- A Statewide TDM Awards Program (described in **Appendix E** of this Guidelines report) should be developed as a result of enhanced coordination and improved project management efforts. Increased visibility for the local projects/programs

should also be a goal for NCDOT. Annual awards will be given to the TDM program that (1) achieve the highest reduction in NOx, (2) achieve the highest reduction in vehicle miles traveled, (3) create the most innovation/solutions to congestion and related problems associated with mobility. DENR should be an active participant in the development of this effort.

- NCDOT should conduct market research to identify on-going programs and tools that will be most supported by potential users. In other words, what mechanisms for changing commuter behaviors are working and which ones are not? Citizen and policy-maker awareness of TDM programs needs to be tracked and discussed routinely with the various boards of the local programs.

- TDM programs should be established in Asheville, Hickory, and Fayetteville with the organization and management structure that is appropriate for each community to be determined at a later date. (A TMA structure has been proposed for Asheville.)

- The focus of new program efforts will be quantifiable results and information with an emphasis on the targets necessary to achieve reductions in NOx and VMT goals as described in Senate Bill 953.

4.3 Organization and Program Management

6. To develop effective changes to commute behaviors and to produce the sorts of results that North Carolina is looking for in Senate Bill 953, a comprehensive program of "commuter management" is suggested. A program designed around Florida's Commuter Assistance Program might be pursued as soon as the NCDOT staff person is hired to develop such an initiative. (This program is described in **Appendix F** section of this report.)

   In the meantime, the kinds of individual program information that will help create a more performance-based effort at the local level while also giving the state valuable information for comparative purposes and illustrate progress are:

- number and types of commuters requesting assistance on a monthly basis
- number of commuters contacted and an indication of how they are contacted
- number of commuters changing from their single occupant vehicle to their ridesharing mode or their TDM-related mode
- number of agency vans in service and additional vans participating in any regional initiative in place (Rural Jobs Access)
- number of vehicle trips eliminated for all commuters
- number of vehicle miles (traveled) eliminated
- number of employers contacted and resulting employee participants,
- including mechanism for contact (meetings, direct, Board involvement, etc.)
- description of major accomplishments from each contact, specifying quantifiable information that led to a result or outcome
- number of parking spaces reduced or saved in the service area
- NCDOT and the TDM Coordinators should work together to define additional parameters for measurable objectives, which will lead to results-oriented information.

- This list of "measurables" can be expanded and modified based on actual program experience.

7. *The establishment of TMA's in areas where there are both clear commute-related problems and opportunities for cooperative action should be considered as an effective means of facilitating select demand management activities in specific geographic areas. To begin, organizing a TMA for State Government and one in Asheville will focus demand management efforts on specific geographies and specific organizations to produce effective results.*

   The TMA in Asheville would focus on incorporation of TDM as part of existing "smart growth" and air quality goals, using the Broadway Corridor as a first priority. Improved transit services should also be part of the new TDM package along with expanded vanpool services including a Rural Jobs Access-type initiative.

   A second TMA is recommended for State Government. State Government employees are a unique group with specific needs. Their transportation activities should be united under a TMA. Necessary leadership, oversight and overall program management would be provided by NCDOT, DENR and DOA, with assistance and technical support provided by SMARTCOMMUTE and TTA.

   The immediate focus for the State Government TMA would be the resurrection of the state's earlier teleworking program, but to assure success, a partnership should be formed with NORTEL. NORTEL has an excellent teleworking program, and it is recommended that NCDOT seek a loaned executive or similar position from NORTEL to work directly with the three Secretaries of DOT, DENR and DOA to develop this TMA and execute the teleworking project as the first priority for 2004.

   In addition, the TMA should implement an expanded version of the existing preferential parking program for car and vanpooling. A formal flexible work-hours program should be established and promoted for State Government employees. A subsidized transit pass program specifically for State Government employees, with a strategically dedicated "sales outlet" should be established, and a parking cash-out plan should also be developed.

   A formal study of the state employee parking program, including current parking policies, parking pricing and allocation strategies should be part of this first round of studies and implementation plans. Because there is clearly a relationship between the availability of parking, its configuration/location and commuter's willingness to explore alternatives, NCDOT and DNER should illustrate their leadership in several areas by examining current policies and possible changes as a means of encouraging employee participation in TDM/ridesharing.

- TMA's are recommended for State Government and Asheville to bring focus and recognition to two organizational efforts in varying parts of the state. The TMA's can take advantage of the leadership currently offered by the NCDOT and by the membership and participation of those supporting the TDM Panel from Asheville and from the various offices of State Government.

- Transportation Management Associations (TMA's) are typically non-profit organizations of businesses and developers, but they can also represent local jurisdictions, transit organizations and state governments.

- Specific geographic areas are defined and represented, with the TMA's delivering specific services and responding to specialized needs defined by those within the service area. As the name reflects, management of the transportation problems and issues are at the forefront of the effort.

- TMA's, like the SMARTCOMMUTE@RTP, offer their constituents a combination of services, concentrating on (1) advocacy, for the improvement of services, (2) education and marketing to compel commuters to use alternative services, the (3) facilitation of certain activities that promote TDM such as "guaranteed ride home" programs and ridematching, and (4) the provision of assistance to members in understanding regulations and other guidelines (such as air quality or local transportation regulations).

8. *Where possible, NCDOT should expand/integrate the Rural Jobs Access project into existing ridesharing programs, and improve the marketing and outreach efforts of 2Plus. There should be a focus on performance and specific incentives for advancing this project.*

- This program could benefit from further integration into the ridesharing/TDM marketplace. In Wilmington as an example, there is the possibility of linking the vanpooling program to existing transit services to broaden the overall regional service capability. There may be other opportunities for this type of integration, and NCDOT should explore all possibilities.

- An examination of the existing Rural Job Access program through the SWOT interviews found that there was a need to (1) significantly improve marketing materials, (2) apply program funds more directly to the benefit of the users in the form of incentives and services, (3) develop a consistent name and logo for the program and vans in service, and (4) develop some sort of peer-to-peer communication between participating companies and contacts so that they can better know, understand and translate the benefits of the program but also communicate the availability of van seats, route information, etc. within their companies and within their communities. The current cost-benefit/cost-effectiveness of the program needs to be reassessed.

9. *Reductions in single occupant vehicle travel can only be expected if commuters have a range of convenient travel options and a series of reliable support services and if they gain advantages (e.g., convenience, time, and/or money) through participation. In addition to the more traditional "menu" of TDM services currently provided by most of the local programs across the state, a number of alternative mode "support services" are recommended for development. While some may be considered as innovative, others are natural "partners" to the more traditional program elements. (This is a partial list of the programs and services most likely to generate results, recognizing that some face public acceptance challenges.)*

    - HOV facilities

- Carsharing
- Monetary incentives (e.g., parking cash- out and employee transportation allowance)
- Transit subsidies
- Alternative work schedules
- Guaranteed ride home programs
- Parking management programs (including preferential parking)
- Facilities amenities (on-site conveniences)
- Select development strategies/regulations
- Transit-oriented, pedestrian-oriented development plans
- Access/priority restrictions
- Trip reduction ordinances
- Modified zoning and subdivision control ordinances
- Road/congestion pricing
- VMT tax

These program elements should be considered in all locations where TDM programs currently exist. Other strategies and innovations should be explored with NCDOT. (A complete list of TDM strategies and the implementation-related responsibilities by agency appears in **Appendix G** of this report.)

4.4 Legislative, Zoning, and Planning Tools

10. *Additional Trip Reduction Ordinances or Programs should be developed in select locations. Using the Durham Model, additional Ordinances should be developed in Wilmington, Asheville and the Research Triangle Park. (The Durham County Trip Reduction Program appears in **Appendix H** of this report.)*

- Each of these communities has its own motivations for interest in a model ordinance. In Asheville, there are already strong "Smart Growth" initiatives underway, and these efforts can be translated into components of a TDM ordinance if a support mechanism for this effort can be found. With the air quality problems facing the Asheville area, TDM and transit could work together to address their growth and development issues, producing significant improvements in several categories.

- Wilmington is concerned about its overall quality of life and is looking at TDM as a possible tool to use in conjunction with future development strategies. Former Mayor

Peterson had expressed an interest in an ordinance as a means of dealing with traffic *and* development.

- Because the Research Triangle Park has the ability to control its own development plans and can provide direct input to tenants and employees concerning parking and transportation options, the Park would make a very good laboratory for development of another model ordinance. While the Park is currently covered by the provisions of the Durham County ordinance, this concept would allow the Park the opportunity to focus specifically on the needs and issues within its own boundaries. Evaluation of parking, the need for shuttle and transit services and the impact of the I-40 corridor would be part of the assessment of this effort.

11. *In the major urban areas such as Charlotte, Raleigh and Greensboro, a Model Ordinance for Reduced Parking Requirements based on TDM measures should be introduced.*

- An examination of the parking requirements in each city will be necessary, but NCDOT should begin working with the planning staff, local DOT's, DENR and the business communities/chambers to develop an ordinance or a subset of local ordinances to deal with TDM measures.

- Examination of the parking minimums and maximums would be a good beginning point. Developer education sessions and leadership sessions with the financial community will also need to be part of this effort.

- Using model results from Durham and "best practices" from around the state and the country, NCDOT can create a practical approach to use of various TDM measures in the urban areas.

12. *A Model Ordinance for sidewalk construction associated with new development should be considered. This could be applied to urban, small urban and other locations.*

- Encouragement for pedestrian-friendly development and any opportunity for leaving the automobile at home are being proposed.

- Developers and builders should be encouraged to participate in this part of the TDM initiative. This is an opportunity to integrate transit and planning principles together.

13. *NCDOT and the local TDM coordinators should work with local offices of planning and zoning to develop a "TDM review process" so that TDM strategies and improvements become a part of the local land use, land development and planning processes.*

- Transportation planning at both the state and local levels needs to focus on a wide range of mobility, environmental, and other key factors. Rather than focusing on "alternative transportation planning," the State and its partners should clarify that shared-ride travel modes, factors that influence commuter behavior, and traditional mode and facility planning need to be considered as part of integrated strategies. This approach needs to be "elevated" at the state and local levels, but changing this

planning process will take time. Identifying TDM as an important part of the planning process will be an important first step.

- TDM coordinators need to become more visible in all aspects of their local planning efforts. The "TDM agenda" needs to be prominently and permanently displayed on Planning, Transit, Council and Commission agenda.

- The TDM coordinators should participate in updates to the Long-Range Transportation Plan (LRTP) to insure that TDM strategies are included in this and similar efforts.

4.5 Innovation and Creativity

14. The focus of all ridesharing and TDM programs should become innovation and creativity and not merely administration and operations. There is an opportunity to focus on a number of "best practices" from across the state and to begin to create additional ones. This sort of effort will be necessary to achieve the goals set forth in Senate Bill 953 and to begin to elevate TDM into a more prominent role.

As a beginning, the following projects should be "documented" for their results and effectiveness, and NCDOT should work with the respective program/sponsor to publicize the TDM story and determine the applicability of the tool to other locations.

- NORTEL Teleworking Program, Research Triangle Park

- Fare-Free Transit Service, UNC-CH and Town of Chapel Hill

- SMARTCOMMUTE@RTP, Research Triangle Park, TMA and Teleworking

- Meadowmont/Southern Village, pedestrian and transit-friendly development, Chapel Hill

- Model Trip Reduction Ordinance, Durham County

- EPA's model/decision to build less parking, Research Triangle Park

- The Charlotte Area Commuter Register, a free ridesharing publication

- Blue Cross/Blue Shield of North Carolina, employer programs and support, including vanpooling

15. NCDOT and DENR should embrace the advances in hybrid technologies (gasoline and electric) and other alternative fuels, and develop the necessary programs and policies to advance these efforts.

- Initially, state tax incentives should be developed for automobiles purchased with hybrid engines and similar incentives should be developed for vehicles used for vanpooling as the van technology is introduced.

- Perhaps the more powerful step would be to allow hybrids access to the planned HOV lanes in North Carolina. This should be supported at the federal level and at the state level.

The result would be the dual incentive of boosting interest in the energy-saving vehicles and boosting the interest in HOV at a time when North Carolina and at least two communities (Charlotte and the Triangle) are looking seriously at HOV. Arizona already exempts hybrid owners from HOV restrictions.

(An article detailing these technologies and the HOV related issues is included in **Appendix I** of this report.)

16. As performance goals are developed, the new more goal-oriented programs should be defined and promoted. The state should support a new set of TDM programs described as "PROGRAMS OF EXCELLENCE" (or some other name). The idea is to recognize the achievers in the state, those meeting the goals set forth in the Senate Bill, and those identified by the Governor or Mayors, or other state/local leadership for meeting transportation, air quality, and environmental goals.

- Programs should be set up to illustrate the achievements coming from the work of the programs organizing under the new initiative. Those programs achieving specific goals in various categories determined by the state would be recognized through awards and through increased funding.

- Examples of several TDM programs from across the country, along with their particular innovation and the results are included in **Appendix J**.

- Those programs achieving specific goals, especially those aimed toward VMT and air quality as specified in Senate Bill 953 and other similar state documented efforts, would be recognized through awards and increased funding.

*17. Working in cooperation with the Commuter Choice Leadership Initiative (Innovation Transportation Programs & Partnerships), NCDOT and DNER should look for ways to implement a statewide TDM project that would benefit the state and the overall TDM effort. (This overall effort is described in **Appendix K** of this report.)*

- A number of ideas should be explored to make this partnership work, focusing on innovation, the work of the business community, and the role of NCDOT and DENR. A possible demonstration project that would focus on the goals of Senate Bill 953 and the other similar statewide goals should be pursued.

- While a dialogue with this group has just begun, NCDOT should continue to explore all options and opportunities, developing a role for Robin Snyder and her group.

- How can North Carolina become the best workplace for commuters? www.commuterchoice.gov

4.6 Evaluation and Performance Standards

18. NCDOT needs to develop a more strategic and comparative mechanism for evaluating its existing ridesharing and TDM programs' performance. Currently, all

programs receive funding on basically a "pass through" basis. It is recommended that funding decisions for this program be changed to a performance-based initiative. Funding should be based on the results needed. Over time, funding and program adjustments could be made to consider performance, innovations, and other factors.

- NCDOT needs to create new standards by which the existing ridesharing programs would be funded. These standards would be based on a number of goals tied to the state's air quality and VMT reduction strategies outlined in Senate Bill 953.

- Programs should be required to demonstrate progress in reducing emissions and VMT in their respective service areas, perhaps on the basis of the indicators introduced in the previously suggested information in #6. NCDOT should work with each program to develop performance goals tied specifically to the program's mission and to the state's overall TDM initiative.

As the TDM management position and Office of Commuter Assistance are established, performance goals can be refined.

4.7 TDM Toolbox Improvements

19. Some time ago, NCDOT and the ridesharing programs considered a number of TDM "toolbox" elements that were considered necessary to make the state and local programs function more effectively. These elements should be developed and implemented as soon as possible.

- Ridesharing software for use for carpool and vanpool matching for all programs in urbanized areas; ability to link rural and regional programs

- Website development capabilities for those programs that do not currently have a website; NCDOT "links" to all programs

- Commuter Register capabilities or comparable commuter information systems and outreach

- Establishment of a statewide telephone information system (511) for commuter information

4.8 Vanpooling

20. North Carolina's vanpooling programs need to be revamped. Comparable programs in the state of Washington indicate nearly 1500 vanpools in operation, and Connecticut has nearly 400. While North Carolina's program has been in operation for nearly 30 years, a quick look at the current vanpool census seems to indicate a number of operational issues. While problems may be related to the overall downturn in the economy in the state, there has been little attempt to document "the issues" impacting demand. The vanpooling project effort needs to be re-assessed and rejuvenated.

- It is recommended that a “Vanpool SWAT Team” be formed to assist NCDOT in the assessment of how to better utilize existing resources. A number of options should be explored.

- The SWAT Team would be composed of representatives from each of the existing programs that own/operate vans and the 2Plus, Inc., the contract operator of the State’s Rural Job Access vanpool program. There would also be a representative from one or more state programs currently operating successful statewide initiatives in other locations. Washington and Connecticut would be recommended.

- An exploration of how to better manage the existing vanpool programs, including possible consolidation of existing pools into a state-managed effort, should be explored.

- The vanpool fleet, once determined, would need a long-term management and operations plan. This could be under the new Office of Commuter Assistance, in a Vanpool Service Center.

- A Statewide Insurance Agreement needs to be developed. This insurance plan would benefit the vanpool fleet and any vanpools that continue to operate independently.

- The provision of maintenance and customer services, and improvements to overall vanpool operations, need to be explored as part of this SWAT Team effort.

- Elevating the role that vanpooling plays in the state’s TDM “toolbox” is something that NCDOT and this SWAT Team should focus on as part of their efforts and recommendations. Creating new program goals and objectives, including performance-based goals for the program, would be the first initiative for this program.

5.0 THREE-YEAR PROPOSED ACTION PLAN: TDM STRATEGIES

5.1 Year One

STRATEGY:

1. Establish the "case" for TDM by building a foundation of information and program documentation, illustrating success on multiple levels

   Define TDM program for North Carolina, promoting the mission along with clearly defined local program efforts and measurable program goals and objectives assessed through routine evaluation

   Develop a clear, compelling "body of evidence" describing the value of TDM, based on quantitative results in the various markets statewide, illustrating the status of air quality and environmental issues and particularly to reductions in VMT and NOx as specified by Senate Bill 953. (This should include setting annual reduction goals for VMT and NOx and selection of projects that will move the programs out of their planning and advocacy-only roles as described in the TDM Strategies Matrix.)

   Using the information/feedback provided in the SWOT analysis, develop an expanded program of success which includes broader political support for TDM; increase statewide support in locations such as Asheville and Hickory, use TDM ordinances in more locations such as Wilmington and Asheville, formally link TDM initiatives impacting land use and transportation via policy, and develop specialized programs such as HOV in Charlotte and the Research Triangle Park.

   Demonstrate the value of TDM by documenting benefits and the ability of various efforts to produce measurable results; examples include improved travel time savings, cost savings, vehicle miles traveled, but also air quality and environmental improvements needed to satisfy Senate Bill 953

   Evaluate existing ridesharing/TDM programs and institute new program accountability, encouraging improved performance (Reviewing studies of TDM programs in Washington and Maryland, with their emphasis on performance, will help North Carolina move in this direction.)

   Develop and then document a series of "best practices" from which existing programs can modify their efforts, grow and learn; these will be developed to increase the number of alternatives to single-occupant commuting, focus on the land use/transportation link, examine various commuting innovations, etc.

(Examples of North Carolina programs to model were included in the Guiding Principles document, but others can be developed and used to publicize TDM. The purpose is to improve program effectiveness, enhance the quality of existing efforts and improve the appeal of program options to commuters.)

ANTICIPATED RESULTS:

Establish program credibility, increase program accountability by improving performance/results, elevate role of TDM and ridesharing based on quantifiable results, market and validate benefits of TDM, establishing linkages to other transportation initiatives

STRATEGY:

2. Develop the Office of Commuter Assistance, focusing specifically on improving demand management techniques and increasing innovation, improving program performance and producing a series of new initiatives that will help NCDOT meet trip reduction and air quality goals defined in Senate Bill 953

   Using the mission, goals and objectives from the "case building" in #1, this Office will establish and maintain a clear program identity and the overall direction for TDM and related mobility management, statewide

   Create the new position within NCDOT to staff and manage the Office of Commuter Assistance (This will be a highly visible, senior position designed to oversee all mobility and congestion related issues within in the state. Air quality and environmental planning will be related because of the requirements associated with Senate Bill 953. A comparable organization and program has been referenced for Washington in the Guiding Principles document.)

   Develop a Committee of the Board of Transportation to support the Office of Commuter Assistance, promoting TDM and lobbying/advocating on behalf of mobility-related solutions statewide

   As new air quality, VMT and NOx goals are established, promote TDM as one of the primary mechanisms for solving the problem, in partnership with DENR and others

   Develop tools and training to benefit local programs and enhance their performance; encourage partnering with other TDM programs, states and DOT's to assist in the marketing and management of current TDM programs

   Develop annual awards, a "Program of Excellence" to enhance current program performance at the local level, incentives and necessary market research to increase commuter awareness of TDM and improve stakeholder, political awareness/response to existing programs

ANTICIPATED RESULTS:

Clear direction, focus for statewide efforts and program with effective leadership and management; effective management of local programs with training and monitoring of

performance-based programs; more efficient use of state funding for ridesharing and TDM; new focus on innovation; improved awareness at local level concerning benefit of TDM/ridesharing

STRATEGY:

3. Revamp the existing vanpool program to increase results in several areas: improving number of vans in full operation, enhancing overall management and marketing, elevating the role that vanpooling plays in the state's TDM "toolbox"

   Create new program goals and objectives and a program evaluation plan using an external "SWAT" Team as defined in the Guiding Principles

   Develop a revised management plan for existing vans and evaluate specific program elements including insurance, variable size vehicles, central clearinghouse and multiple state programs

   Evaluate local and statewide marketing options to improve commuter responses to the program; evaluate impact

ANTICIPATED RESULTS:

Centralized vanpool operations, central clearinghouse for insurance (on a statewide basis), multiple options for vehicles, improved placement and tenure of vans, resurrection of such tools as state vanpool census and tools to track performance, increased vans in operation statewide.

STRATEGY:

4. Establish a TMA (Transportation Management Association) for State Government/Employees
   (This recommendation includes the resurrection of an earlier proposal for a teleworking program and a proposed partnership with NORTEL for a "loaned executive" to work directly with the three Secretaries of NCDOT, DENR and DOA to develop the project.)

   Create/implement the program with 3 key elements, (1) preferential parking for car and vanpooling, (2) a flexible work hours program, and (3) subsidized transit pass program with a central sales outlet and parking "cash out"; the teleworking program would be a separate, critical element

   To assure the success of these programs, launch a formal study of state employee parking and pricing. NCDOT, DENR and the new TMA should lead this effort along with SMARTCOMMUTE and TTA

ANTICIPATED RESULTS:

Reductions in VMT, improved air quality, reduction in parking demand, increases in employees teleworking; increased employee parking pricing; specifics will be based on the outcome of the TMA

STRATEGY:

5. Establish a second TMA (Transportation Management Association) in Asheville, focused primarily on "smart growth" and air quality goals

Using a select corridor, such as the Broadway or Biltmore Corridor, TDM measures would be incorporated into existing plans for "smart growth", effective management of transportation resources and improved land planning; improved transit services and vanpooling might also be part of a package of related service improvements

ANTICIPATED RESULTS:

Employer and community-based participation, reductions in VMT, improved air quality, reductions in parking demand; specifics will be based on the outcome of the plans for the TMA

STRATEGY:

6. Working in cooperation with US EPA, create a statewide model for implementation of "Best Work Places for Commuters"

Working with EPA, NCDOT should develop a statewide partnership designed to increase the number of employer-based transportation programs targeted at VMT, NOx reduction; program focus should be on innovative solutions to transportation and mobility problems statewide

ANTICIPATED RESULTS:

Model program statewide with performance-based goals and objectives and employer leadership and participation; increased employer participation in transportation management and ridesharing programs

5.2 Year Two

STRATEGY:

1. Under the new Office of Commuter Assistance, and in conjunction with the new statewide TDM program, develop a more effective program of commuter management; use of evaluative tools and information, measuring results in several categories.

   (These are to be designed around Florida's Commuter Assistance Program and will include quantitative indicators such as the number and type of commuters requesting assistance each month, the number and type of commuters contacted and how, the number of commuters changing mode, etc.)

   Using quantitative information about each program, improve program management and begin to standardize elements tied to performance; establish expectations for program results

(If commuters are not responding to certain types of programs, especially after a number of years, then modify programs and use client feedback to adjust programs and services.)

ANTICIPATED RESULTS:

Improved program management at the state level; improved performance at the local level; modification of programs, creating more meaningful results

STRATEGY:

2. Expand/integrate Rural Job Access project into existing ridesharing/TDM programs, improving overall marketing and outreach of the existing 2Plus vanpool program

   Develop effective linkages to ridesharing/TDM programs in locations such as Wilmington where there can be an integration of markets and services

   Improve the basic tools and materials specifically identified in the Guidelines document, but including such things as client marketing materials, identification of the vans with logo and contact information and developing some sort of peer-to-peer communication network among participating companies so that the translation of program benefits becomes well known; the application of program funds needs to be designed to benefit the users of the program

   Assess the program from a cost/benefit perspective and determine an effective way to market the program

ANTICIPATED RESULTS:

Improve results and cost/benefit position of the Rural Job Access vanpool initiative, integrating it into the TDM and ridesharing programs statewide

STRATEGY:

3. In conjunction with local programs and through the Office of Commuter Assistance, develop a series of support services to be marketed as the “menu of TDM services”; these services should be evaluated within each market, based on customer feedback and market research and “built and developed” based on experience and consumer response

   (A sample list was developed for the Guidelines document and the TDM Strategies Matrix.)

   Evaluate effectiveness of menu of services through client feedback and program performance on an annual basis (NCDOT should help local programs develop the menu as needed)

Share results of evaluation with stakeholders in annual review of program funding and review of services effectiveness

Consider expanded "toolbox" elements to be developed at state level and used to improve local programs: ridesharing software, websites with NCDOT links to all programs, Commuter Register or comparable information system, 511 statewide telephone information system

ANTICIPATED RESULTS:

More consumer-based programs, more evaluations of program efforts, routine review of program effectiveness, routine review of the TDM menu and "toolbox", (designed to increase participation in all programs); over time, improve results in key categories such as VMT, travel time savings, commuter cost savings, air quality indicators

STRATEGY:

4. Establish a series of "model" ordinances and planning tools to positively impact growth and development and minimize congestion in several areas. While each community continues to address air quality, "smart growth" and traffic in specific corridors in their own way, TDM offers effective strategies to be used in conjunction with proposed local actions

   Develop additional Trip Reduction Ordinances (Commute Trip Reduction) in Asheville and Wilmington; consider introducing parking code changes as part of the urban design guidelines/review process in the urban areas (Charlotte, Raleigh, Durham, Chapel Hill and Greensboro), and encourage changes to the sidewalk ordinance to encourage pedestrian-oriented development in all locations

ANTICIPATED RESULTS:

Formally introduce TDM to planning processes at varying levels in communities across the state; accelerate recognition of TDM in urban design/planning relationship statewide, positively impact trip reduction and parking requirements in comprehensive manner

5.3 Year Three

STRATEGY:

1 Establish a TDM review process, introducing TDM strategies and improvements into the local land use, land development and urban design/planning process

Elevate TDM within state and local planning processes by prominently and permanently inserting it into the "planning agenda"

Assure that TDM is a recognized part of the land use/transportation decision-making process on state and local levels

Use local TDM coordinators and long-range planning process to determine continuously effective role for TDM programs and TDM efforts

ANTICIPATED RESULTS:

More trip reduction programs, transit-oriented development and TDM-friendly improvements added to local land use practices; TDM ordinances with mandatory VMT reduction and air quality goals instituted as part of development and planning processes

STRATEGY:

2. Develop a program for advancing new technologies and alternative fuels or other similar innovations along with policies to support these efforts

   Develop state tax incentives for automobiles with hybrid engines; similar incentives should be developed for vans used for pooling as the vans are introduced

   Develop a plan to allow hybrids access to HOV lanes in North Carolina; this will require an examination of policy at the federal and state levels

ANTICIPATED RESULTS:

Increased participation in alternative technologies programs; increase in vanpooling option; increase in HOV participation/support

6.0 MARKETING FRAMEWORK

Marketing Orientation/ From SWOT Analysis

STRENGTHS

- General support for TDM statewide
- Energetic staff, desire to improve performance
- Have basic tools such as TDM Ordinance and other parameters to improve/strengthen program efforts
- There is a growing awareness of land use/transportation linkage

WEAKNESSES

- Leadership/corporate support for TDM has disappeared
- Lack of choice riders on resulting services
- No clear spokesperson for leadership and technical direction
- Little focus for air quality problems/collaboration with partner agencies

OPPORTUNITIES

- NCDOT poised to act on TDM (with state and local partners)
- State government ready to reactivate earlier initiatives with NCDOT support
- Partnership opportunities available with TTA, RTP, Charlotte-Mecklenburg, Wilmington, Rural Job Access and others

THREATS

- Programs lack identity, including NCDOT
- There is no clear performance base, tied to marketing base from which to profit and grow
- All programs need quantifiable results
- There is limited understanding of TDM, its benefits

6.1 Marketing Planning for TDM

Marketing can improve the effectiveness of most individual TDM programs and a number of the individual strategies designed to positively impact commute behavior. The most effective marketing programs are often those developed in cooperation with customers, major stakeholders and policymakers and those that will benefit from the implementation of TDM, including commuters, employers and business organizations such as Chambers and TMA's.

Marketing programs should be built around a program's central mission and should reflect a clear and consistent message about what the program intends to accomplish. Various work elements should be tied back to the central mission and supported by on-going market research and evaluation. Client feedback, integrated into the research, will reflect the appropriateness of program goals, work plans, products and services.

An effective marketing plan can anchor other organizational efforts and contribute to the effective development and success of products and services. Because today's TDM programs have to be strongly appealing in order to lure commuters from their automobiles, TDM marketing plans have to include a mix of strategies to address various markets, changing stakeholders and a broad menu of services.

Ridesharing and TDM programs in North Carolina have focused on the development of a variety of strategies to encourage commuters to change their travel behaviors. The majority of these strategies fall into the planning, advocacy and encouragement category, which are common to many ridesharing and TDM organizations.

The SWOT analysis found that there was a limited understanding of TDM among key stakeholders, employers and other "customers" interviewed as part of the TDM study process. In general, there was a limited understanding of the overall benefits of TDM and the specific results to be achieved through various efforts. Several stakeholders could not "quantify" the effectiveness of the programs. Some could not translate the importance of TDM or the meaning of the work as it related to reductions in congestion or improvements in air quality.

To build a stronger case for the importance and relevance of TDM, and to improve customer and key stakeholder awareness of program benefits, a marketing framework was proposed. The marketing framework would use the findings of the SWOT analysis and the Guidelines document and then, focus on the primary elements of the Three-Year Action Plan.

Key considerations for the marketing framework included the following:

(It should be noted that additional market research and evaluation would be necessary to support these activities. Much of this would need to be accomplished at various stages of implementation.)

6.1.1 Goals of the Overall Marketing Framework

- Introduce the concept of TDM as defined by NCDOT through its program mission, reinforcing its importance/value through various improvements and savings (VMT, NOx as examples)

- Identify and promote the new Office of Commuter Assistance and support local TDM/ridesharing program efforts

- Provide specific information about TDM-related efforts, producing impacts locally and statewide; "feature" models and successes

- Announce "new and improved" products, services, benefits and innovations, including awards

6.1.2 Target Markets

The major target market will be those groups that need a broader understanding of TDM, those that will need to see transportation alternatives as more relevant and appealing. The customer base will include political representation, commuters, key state government officials, other TDM program representatives and those in a position of marketing and supporting transportation policies and programs.

Specific targets, which may be the focus of marketing information as it is developed, may include:

- General Public (targeted in corridors where special promotions may be triggered as a result of "building the case" and enhancing an existing program effort)

- Employers (special case information tied to "Best Place" initiative or model programs, also to help "build the case")

- Elected Officials (all levels, needed for advocacy and understanding)

- Targeted Agency Officials (such as the Board of Transportation, for select advocacy)

- Media (specialized campaigns at the state and local levels)

6.1.3 Broader Benefit

Focused public and political attention on transportation with special emphasis on mobility and congestion-related issues, air quality; the mission is to include the education of various publics about the benefits of TDM for the express purpose of changing attitudes and commute behavior

6.1.4 Strategy Development

1. ESTABLISHING "THE CASE" FOR TDM	
Target Market	Statewide, with appropriate links to local programs
Program Impact/ Improvement	NCDOT, through mission, goals and objectives Companion programs and materials (local)
Results	• Evidence, case-building for pooling and transit, support for alternatives to SOV commuting, measurable improvements, cost-savings and other results. • Illustrate impact: reduce auto use, vehicle miles of travel, travel shifts by mode, environmental/air quality impacts • Illustrate transit ridership increases, HOV-supporting characteristics • Illustrate changes in land use and transit-oriented development models
2. DEVELOP/ENHANCE PROGRAM IDENTITY	
Target Market	Statewide with links to existing NCDOT programs
Program Impact/ Improvement	• Enhanced awareness at state level, local programs • Improved customer and stakeholder understanding of TDM
Results	• Education, outreach designed to support new program and policy • Explanatory information and materials with focus on purpose and need • Encourage support and participation
3. CREATE SPECIFIC OFFICE FOR MANAGEMENT AND PROMOTION	
Target Market	Statewide with links to existing local programs
Program Impact/ Improvement	• Opportunities for improved leadership and improved • program management • Improved customer and stakeholder awareness on multiple levels
4. VANPOOL PROGRAM	
Target Market	• Commuters • Employers, employees • Existing vanpoolers
Program Impact/ Improvement	• Enhanced awareness statewide • Increases in vanpool formation and use • "New and improved" messages/look • Incentives package via new management
Results	• Education, improved program designed around new program and policies • New products and services

	• More vans in operation (improved "indicators")
5. TMA FORMATION - The TMA represents a major opportunity to specifically focus on the provision of service, making various elements of TDM accessible to the communities and consumers they serve. TMA's function as multi modal sales and promotional agents to employers and others, representing a unique brand of outreach and promotion of TDM products, services, information and technical assistance.	
Target Market	• Commuters (in specific markets) • Employers and their employees • Key leaders in each market (State Government and Asheville)
Program Impact/ Improvement	• Enhanced awareness of options to SOV • Increased participation in alternatives to driving alone • Increases in employer participation/support for TDM • Improved key indicators (parking, VMT, air quality, etc.)
Results	• Education and awareness focused on specific programs • Employer-based program with specialized tools and services • Unique focus and scale of activities, often with corporate support for programs
6. DEVELOP "BEST PLACE WORK PLACE" MODEL - This program, if enacted on a statewide basis, can integrate congestion and air quality goals shared by NCDOT and EPA and focus on enlisting the support of employers for achieving those goals. Specific marketing and outreach goals need to be developed based on the prior program experience and success of this program in other parts of the country. NCDOT and EPA may modify employer programs and various initiatives based on products and services that motivate employer involvement and result in "savings" in a number of areas.	
Target Market	• Statewide, with focus on strong market areas as defined by "Work Place" • Criteria Specifically developed list of employers
Program Impact/ Improvement	• More employers participating based on air quality and • other motivators • Benefit from national model and experience • Developing models for improved results
Results	• Expansion of employer efforts • Broadened interest in programs and TDM • Partnering and innovation

TDM Marketing and Communications Framework

Year One

Identity Development

Advertising Tools

Public Relations

Special Promotions

Print Collateral

Print/Signage Advertising

Media Relations

Worksite Promotion

Direct Mail Promotion

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development	"Branding" and concept development	NCDOT in cooperation with partner agencies & local programs	First quarter, first year	Program name, logo and "tag lines"	Test names, test concepts and "message"	Search for a statewide "winner" ("Good Roads State", "First in Flight")
	Baseline awareness studies	NCDOT, local programs	First quarter, first year	Introduce, revitalize & build support; establish constituencies	Use market research to build understanding & change attitudes (change habits)	

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development ---------- Advertising Tools	Print collateral & direct mail with factual information on TDM FAQ's / PSA's	NCDOT with local program coordination *	TBD	Increased awareness & recognition of program and its benefits; "household word" mentality	Make the case for improving air quality, mobility on various levels in multiple locations	
	Newsletters/ electronic communications through senior level corporate support	NCDOT and local level programs *	TBD	New links to state and local efforts, re-establishing the effort and the results		

* Opportunities to develop parallel marketing efforts with local programs

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development ---------- Camera Ready Ads	Clip / ads varying sizes, promoting new names, TDM and benefits (mix a variety of paid and psa)	NCDOT designs, develops and produces in conjunction with overall initiative	Second quarter, first-year (And continue as periodic promotion)	Continues promotion, broad-based marketing sent to media, community, employers, neighborhood "news"		

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development --- Advertising Tools	Websites with local links and "live updates"	NCDOT and local programs	TBD in conjunction with Office of Commuter Assistance "launch"	Requires updating to be effective but can be useful tool		
	Variable message signs Outdoor/highway signage	NCDOT	TBD in conjunction with Office of Commuter Assistance	Consider deployment for initial campaign or "announcement" of program Highway signs may need uniform message		

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development --- Public Relations	Media relations/ contacts Media training Speakers bureau	NCDOT in cooperation with partners and local programs	Immediate but intensifies as Office of Commuter Assistance is launched	Familiarize the public with TDM, the concept and results of efforts, Senate Bill 953	NCDOT and partners need to be ready; want trends to be positive	NCDOT and programs need to be media savvy
	Complete media kit: • News releases • Sample brochures • Posters • Facts/ figures • Camera-ready art Contacts w/ • Bios for follow-up quotes	NCDOT		Media "blitz" but on-going		Create framework of understanding that will grow over time

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development ---------- Key Message Development	Information, events, media "attractions"	NCDOT with partners and integration of local programs	TBD as response to "branding" evolves	Strengthen air quality, mobility, cost savings or other elements of marketing messages	Evaluate public response and work directly with media through "face" time	Cultivation of understanding the program, messages, special efforts with media

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development --- Special Promotions	Work site promotions Employer Meetings ETC promotions	NCDOT sponsorship in conjunction with local programs	TBD	Dedicated attention to TDM and projected results with employers; heightened level of awareness	Good opportunity to re-introduce various public/private partnerships and their results	Promote the need for outcome/ results Repeat the message
	"Fairs" and Community events			Commuters and others motivated by the "frenzy" of interest		

Print Collateral Print/Signage Advertising Media Relations

Worksite Promotion Direct Mail Promotion Special Events

"Building the Case"

Activity	Description	Lead Coordinating Organization /Individual	Implementation Dates	Outcome	Special Notes	Comments
Identity Development ---------- Establish Dialogue	Follow up calls with media and key stakeholders	NCDOT and partners	TBD	Routinely verifying that "the message" is out there, the story is being printed that the policy-makers are hearing it	Determine validity of the message and appropriate form	
		Focus on policy-level decision-makers and constant information flow				

7.0 CONCLUDING STATEMENTS

Everyone has a stake in the fight against bad air and congestion. The desire for improved mobility is a national objective. For the most part, the protection of our public health, the quality of our communities and the strength of our transportation system has become a basic arithmetic problem-- requiring improvement means that more people need to drive less.

Most people today understand the concepts associated with the more sophisticated definition of "TDM". Shifting the traffic in any one location away from the peak and looking for alternatives that produce a reduction in vehicle miles traveled (VMT) is common in many communities. Through Senate Bill 953, North Carolina has elevated the role of TDM and has formalized the reduction plan for both VMT and emissions of nitrogen oxides (NOx) from all sources by at least 25% by July of 2009. These goals will require attention to the arithmetic.

For some years now, NCDOT and its local ridesharing and TDM programs have focused on the elements of their programs that could be labeled as "planning and advocacy". So-called "carrots" often allowed easier "sales", program participation, and program experience to grow based on community, employer, employee and commuter response. There seemed to be no need for other more stringent "sticks" or regulation, no additional efforts beyond heavy encouragement. Some programs would explain that they are not "there" yet. Many of our programs and some of our "best practices" have probably encouraged people to actually drive *more*…meaning that if you look around the state, you see a lot of anti-TDM development patterns including suburban office parks, houses on ½ acre lots (and more), the preference for cul de sac neighborhoods, suburban outer loop shopping centers that draw development beyond transit's capabilities and non-pedestrian and non-TDM friendly neighborhoods.

But now NCDOT has completed its look at TDM and a number of alternative strategies designed to ignite TDM activities across the state. Agreeing to accept the role of leader is one of the most important first steps in this process. Asking its partners such as DENR and others to assist in implementing viable state programs that will impact state employees is also a very important first step in announcing that this is truly an important initiative.

NCDOT has an opportunity to initiate several changes within the ridesharing/TDM programs that it funds, asking them to become more accountable and making them "performers" as either "programs of excellence" or "national programs of excellence" through a joint initiative with US EPA. Either way, the goal is to make a difference in commuting patterns, pollution and development. Asking employers to move from "planning to do" into "doing" and placing measurable results at the top of the NCDOT importance list should make both the locals and the state proud of the accomplishments while making a recognizable difference in the communities which are served.

Integrating "softer" ridesharing programs into more accountable TDM programs may take time, but this begins with the kind of dialogue identified and established with the SWOT analysis. The need for a routine communication of the purposeful efforts conducted by the TDM programs and led with NCDOT's assistance, will be invaluable to the on-going success of this overall initiative. Leadership again… giving and taking on both sides, building and fortifying these programs so that they can be equipped to make a difference.

NCDOT will be well positioned to take a new, more pivotal role in promoting TDM in both the urban and rural areas of North Carolina if it proceeds with the proposed staff and organizational changes to the TDM initiatives described as a result of this study. Strategies that are measurable can be jointly monitored for progress, publicized and nurtured by NCDOT and its partners (DENR and EPA, as examples).

On an annual basis, NCDOT should encourage each of its existing programs (and its own state government employee-based effort) to develop and pursue at least one TDM innovation. This can be developed with NCDOT's help, with the help of others already involved with TDM (again such as EPA), etc. It is an opportunity to focus on employer and business needs and new ideas; not just re-inventing what has already been tried.

These are exciting times for the program and for NCDOT. If NCDOT can act now on a number of the strategies and recommendations discussed by its leadership and the TDM Panel, they are poised to make a difference. The requirements of Senate Bill 953 are one concern. The health and well being of North Carolina's citizen's are the other.

8.0 APPENDICES

Appendix A	Press Release from State of North Carolina Governor's Office and SB 953
Appendix B	Survey Questionnaire
Appendix C	Interview Schedule and Participants
Appendix D	Position-related information, Washington State's TDM Office (2002)
Appendix E	Statewide TDM Awards Program Examples and the Governor's CommuteSmart Awards
Appendix F	Florida's Commuter Assistance Program
Appendix G	TDM Characteristics and Strategies
Appendix H	Durham's Trip Reduction Program, Durhan, NC
Appendix I	Advances in Technologies
Appendix J	Programs of Excellence and Measures, Markers and Mileposts, Washington State Department of Transportation, May 31, 2003
Appendix K	The Commuter Choice Leadership Initiative and Best Workplaces for Commuters

Appendix A
Press Release from State of North Carolina Governor's Office and SB 953

Michael F. Easley
Governor

State of North Carolina
Office of the Governor

For Release: **IMMEDIATE**
Date: January 24, 2003

Contact: Amanda Wherry
Phone: (919) 733-5612

GOV. EASLEY NAMES PANEL TO IMPROVE AIR QUALITY

Diverse Group of Government and Business Leaders to Focus on Increasing Commuting Options Reduce Vehicle Emissions

RALEIGH - Gov. Mike Easley has named a panel to improve air quality in North Carolina by reducing vehicle emissions resulting from job-related travel by 25 percent by 2009. The panel will focus on developing a statewide travel demand management (TDM) plan to increase commuting options for workers in both the private and public sectors.

TDM stands for a wide range of options for using existing transportation infrastructure in a more efficient manner - from carpooling, telecommuting, public transit and flexible work hours - all of which aim to reduce the number of cars on the road during the rush hour commute.

"Reducing job-related travel by 25 percent by 2009 is an ambitious goal, but the stakes could not be higher in this effort," said Easley. "As the number of cars on our highways increases, so does the level of ozone pollution, which carries serious consequences for the respiratory health of our citizens. Reducing the number of cars on the highway will also strengthen economic development and improve business efficiency by reducing time lost for commuters. I am confident that this panel will provide the vision and leadership necessary to meet our goal and improve air quality across the state."

The statewide TDM plan will include regional plans at the local level across the state to ensure that the emissions goal is achieved. In addition, the 16-member panel has been tasked to develop strategies to enhance existing TDM programs, foster development of new programs and promote TDM strategies in both rural and metropolitan areas for the public and private sector.

The panel, which held its first meeting on Jan. 6, is made up of representatives of federal, state and local government and business leaders from across the state with support from NCDOT staff and a consultant team. The panel was created in response to recent legislation that calls for a 25 percent reduction of both the nitrogen oxide emission levels and number of vehicle miles traveled in the state, and charges the departments of Transportation, Administration and Environment and Natural Resources to oversee the effort to meet these goals. The plan is scheduled to be complete by August.

-more-

Governor's Press Office
State Capitol, Raleigh, NC 27603-8001
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North Carolina had three of the top 25 metropolitan areas in the country for ozone pollution, as rated by the American Lung Association. The annual national study by The Road Information Program (TRIP) lists those same areas in the top 10 in percentage increase in commuting time from 1990 to 2000. In addition, a large number of counties, both urban and rural, are expected to be identified this year by the U.S. Environmental Protection Agency as being in non-attainment of national air quality standards.

Panel Members

Gene Conti, Chief Deputy Secretary of Transportation, Chair (State Government)
John Phelps, Manager of Facilities and Security for Corning, Inc. in Wilmington (Business)
Jim Palermo, Executive Vice President of Bank of America in Charlotte (Business)
Kennon Borden, Partner with Borden Real Estate in Durham (Developer)
Crystal Bunch, Coordinator of Smart Commute @RTP in the Research Triangle Park (Technical)
Lawless Bean, Coordinator of the Wilmington Regional TDM Program (Technical)
Beau Mills, Director of Intergovernmental Relations for the N.C. Metropolitan Coalition League of Municipalities in Raleigh (Technical)
Nancy Dunn, N.C. Board of Transportation member from Winston-Salem (Transportation)
Marion Cowell, N.C. Board of Transportation member from Charlotte (Transportation)
Ellen Reckhow, Chair of the Durham County Board of Commissioners (Local Government)
Charles Worley, Mayor of Asheville (Local Government)
Bill Laxton, Director of the U.S. Environmental Protection Agency, Office of Administration and Resources Management in RTP (Federal Government)
Dempsey Benton, Chief Deputy Secretary of the N.C. Department of Environment and Natural Resources (State Government)
Judith Bell, Human Resources Partner for the Office of State Personnel (State Government)
Nina Slozburg, Napro Communications in Raleigh (Marketing)
Elaine Lyerly, President of Lyerly Marketing in Charlotte (Marketing)

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GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 1999

SESSION LAW 1999-328
SENATE BILL 953

AN ACT TO ENACT THE AMBIENT AIR QUALITY IMPROVEMENT ACT OF 1999.

Whereas, the Constitution of North Carolina declares that the policy of this State is to conserve and protect State lands and waters for the benefit of all North Carolina citizens and to control and limit air pollution within the State; and

Whereas, the State has enacted comprehensive statutory and regulatory protections for reducing air pollution from stationary sources; and

Whereas, ozone air pollution adversely affects the health and welfare of the citizens of North Carolina through the impairment of lung function and exacerbation of asthma and other diseases of the lung; and

Whereas, visibility at some of the State's places of beauty, such as the Great Smoky Mountains National Park and the Blue Ridge Mountain range, has been impaired by ozone air pollution that is created by the reaction of nitrogen oxides (NOx) and other chemicals in sunlight; and

Whereas, the decentralized system of inspection stations effectively uses a public-private partnership to enforce motor vehicle pollution controls; and

Whereas, gains in motor vehicle pollution control

technology have been offset by increased vehicle use, resulting in greater emissions of nitrogen oxides (NOx) and greater ozone air pollution; and

Whereas, the sulfur contained in gasoline impedes the effectiveness of catalytic converters, the devices that reduce the amount of pollution emitted from vehicle tailpipes, thereby degrading the emission control systems of vehicles; and

Whereas, new motor vehicle pollution control technology is more sensitive to the sulfur content of fuels and will require new emissions inspection methods; and

Whereas, reducing emissions of nitrogen oxides (NOx) from motor vehicles by twenty-five percent (25%) within the next 10 years will complement the State's stationary source control strategy; and

Whereas, reducing the growth of vehicle miles traveled in the State by twenty-five percent (25%) within the next 10 years will complement the State's controls of nitrogen oxide (NOx) emissions from stationary sources; and

Whereas, leaking underground storage tanks and tanker trucks release quantities of volatile organic compounds into the air, which mix with nitrogen oxides (NOx) to form ground level ozone; and

Whereas, clean burning fuels, alternative-fueled vehicles, and low emission vehicle usage should be encouraged statewide; and

Whereas, the State must lead the way in combating ground level ozone pollution from motor vehicles through its own purchases and policies; Now, therefore,

The General Assembly of North Carolina enacts:

PART I. STATEWIDE GOALS

Section 1.1. It shall be the goal of the State to reduce emissions of nitrogen oxides (NOx) from all sources by at least twenty-five percent (25%) by 1 July 2009. It shall be the goal of the State to reduce the growth of vehicle miles traveled in the State by at least twenty-five percent (25%) of that growth that would otherwise occur by 1 July 2009. The Department of Environment and Natural Resources and the Department of Transportation shall evaluate progress toward achieving these goals in each fiscal year and shall report their findings and recommendations as to any measures that may be needed to achieve these goals to the Environmental Review Commission on or before 1 October of each year beginning 1 October 2000.

PART II. SULFUR CONTENT OF MOTOR FUELS

Section 2.1. Article 3 of Chapter 119 of the General Statutes is amended by adding a new section to read:
"ß 119-26.2. Sulfur content standards.
(a) No person shall manufacture, sell, or offer for sale gasoline that contains a concentration of sulfur greater than 30 parts per million except that a person may manufacture, sell, or offer for sale gasoline that contains a concentration of sulfur of not more than 80 parts per million if the average concentration of sulfur in the gasoline manufactured, sold, or offered for sale by that person is 30 parts per million or less.

The average concentration of sulfur contained in gasoline shall be determined on the basis of a one-year period established by rule.

(b) The Gasoline and Oil Inspection Board shall adopt rules to implement this section."

Section 2.2. Section 2.1 of this act becomes effective as provided in this section. No later than 1 July 2000, the Governor shall determine whether the United States Environmental Protection Agency has adopted, pursuant to the Notice of Proposed Rulemaking published on 13 May 1999 in the Federal Register, Volume 64, Number 92, Page 26003 et seq., regulations applicable to gasoline manufactured, sold, and offered for sale in this State that limit the sulfur content of gasoline to a concentration equal to or less than the concentration set out in Section 2.1 of this act. If the Governor so determines, the Governor shall issue an Executive Order setting out the date on which Section 2.1 of this act becomes effective, which shall be the date on which the federal regulation becomes effective in this State. Otherwise, Section 2.1 of this act becomes effective 1 January 2004. If the United States Environmental Protection Agency promulgates a regulation that imposes a limit on the concentration of sulfur in gasoline other than that set out in G.S. 119-26.2, as enacted by Section 2.1 of this act, it is the intention of the General Assembly to review the limit established in G.S. 119-26.2. In that event, the Environmental Review

Commission shall review the limit on the concentration of sulfur in gasoline and report its findings and recommendations, if any, to the General Assembly.

Section 2.3. G.S. 119-26.1 reads as rewritten:

"ß 119-26.1. Oxygen content standards Content of motor fuels and reformulated gasoline.

(a) Rules adopted pursuant to G.S. 143-215.107(a)(9) to regulate the oxygen content of gasoline motor fuels or to require the use of reformulated gasoline shall be implemented by the Department of Agriculture and Consumer Services and the Gasoline and Oil Inspection Board. Such rules shall be implemented within any area specified by the Environmental Management Commission when the Commission certifies to the Commissioner of Agriculture that implementation:

(1) Will improve the ambient air quality within the specified county or counties;

(2) Is necessary to achieve attainment or preclude violations of the National Ambient Air Quality Standards; or

(3) Is otherwise necessary to meet federal requirements.

(b) The Department of Agriculture and Consumer Services and the Gasoline and Oil Inspection Board may adopt rules to implement this section. Rules shall be consistent with the implementation schedule and rules adopted by the Environmental Management Commission.

(c) The Commissioner of Agriculture may assess and collect civil penalties for violations of rules adopted under G.S.

143-215.107(a)(9) or this section in accordance with G.S. 143-215.114A. The Commissioner of Agriculture may institute a civil action for injunctive relief to restrain, abate, or prevent a violation or threatened violation of rules adopted under G.S. 143-215.107(a)(9) or this section in accordance with G.S. 143-215.114C. The assessment of a civil penalty under this section and G.S. 143-215.114A or institution of a civil action under G.S. 143-215.114C and this section shall not relieve any person from any other penalty or remedy authorized under this Article.

(c1) The clear proceeds of civil penalties assessed pursuant to this subsection shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2.

(d) The Commissioner of Agriculture may delegate his powers and duties under this subsection to the Director of the Standards Division of the Department of Agriculture and Consumer Services."

PART III. MOTOR VEHICLE EMISSIONS INSPECTION AND MAINTENANCE

Section 3.1. Article 21B of Chapter 143 of the General Statutes is amended by adding a new section to read:

"ß 143-215.107A. Motor vehicle emissions testing and maintenance program.

(a) General Provisions. --

(1) G.S. 143-215.107(a)(6) shall be implemented as provided in this section.

(2) Motor vehicle emissions inspections shall be performed by a person who holds an emissions inspection mechanic license issued as provided in G.S. 20-183.4A(c) at a station that holds an emissions inspection

station license issued under G.S. 20-183.4A(a) or at a place of business that holds an emissions self-inspector license issued as provided in G.S. 20-183.4A(d). Motor vehicle emissions inspections may be performed by a decentralized network of test-and-repair stations as described in 40 Code of Federal Regulations ß 51.353 (1 July 1998 Edition). The Commission may not require that motor vehicle emissions inspections be performed by a network of centralized or decentralized test-only stations.

(b) Type of Test Required. -- Motor vehicle emissions inspections shall be performed using the two-mode Acceleration Simulation Mode (ASM) test described in Federal Register, Volume 57, Number 215, (5 November 1992), Pages 52955 to 52996.

(c) Counties Covered. -- Motor vehicle emissions inspections shall be performed only in the following counties: Cabarrus, Durham, Forsyth, Gaston, Guilford, Mecklenburg, Orange, Union, and Wake.

(d) Additional Counties. -- The Commission may require that motor vehicle emissions inspections be performed in counties in addition to those set out in subsection (c) of this section. In determining whether to require that motor vehicle emissions inspections be performed in a county, the Commission may consider the population of, and distribution of population in, the county; the projected change in population of, and distribution of population in, the county; the number of vehicles registered in the county; the projected change in the number of vehicles registered in the county; vehicle miles traveled in the county;

the projected change in vehicle miles traveled in the county; current and projected commuting patterns in the county; and the current and projected impact of these factors on attainment of air quality standards in the county and in areas outside the county. The Commission may not require that motor vehicle emissions testing be performed in any county with a population of less than 40,000 based on the most recent population estimates prepared by the State Planning Officer. The Commission may not require that motor vehicle emissions testing be performed in any county in which the number of vehicle miles traveled per day is less than 900,000, based on the most recent estimates prepared by the Department of Transportation. In order to disapprove a rule that requires that motor vehicle emissions inspections be performed in one or more additional counties, a bill introduced pursuant to G.S. 150B-21.3(b) must amend subsection (c) of this section to add one or more other counties in which the total population and vehicle miles traveled per day equal or exceed the total population and vehicle miles traveled in the county or counties listed in the rule that the bill would disapprove."

Section 3.2. The Environmental Management Commission shall adopt rules to implement G.S. 143-215.107A(b), as enacted by Section 3.1 of this act. These rules shall become effective on 1 July 2002. The Environmental Management Commission shall not require that motor vehicle emissions inspections be performed

in any county pursuant to G.S. 143-215.107A(d), as enacted by Section 3.1 of this act, prior to 1 July 2006. The Environmental Management Commission shall not require motor vehicle emissions inspections for diesel powered vehicles prior to 1 July 2001.

Section 3.3. Effective 1 July 2003, G.S. 143-215.7A(c), as enacted by Section 3.1 of this act, reads as rewritten:

"(c) Motor vehicle emissions inspections shall be performed only in the following counties: Cabarrus, Catawba, Cumberland, Davidson, Durham, Forsyth, Gaston, Guilford, Iredell, Johnston, Mecklenburg, Orange, Rowan, Union, and Wake."

Section 3.4. Effective 1 January 2004, G.S. 143-215.7A(c), as enacted by Section 3.1 of this act and amended by Section 3.3 of this act, reads as rewritten:

"(c) Motor vehicle emissions inspections shall be performed in the following counties: Alamance, Cabarrus, Catawba, Chatham, Cumberland, Davidson, Durham, Forsyth, Franklin, Gaston, Guilford, Iredell, Johnston, Lee, Lincoln, Mecklenburg, Moore, Orange, Randolph, Rowan, Stanly, Union, and Wake."

Section 3.5. Effective 1 July 2004, G.S. 143-215.7A(c), as enacted by Section 3.1 of this act and amended by Sections 3.3 and 3.4 of this act, reads as rewritten:

"(c) Motor vehicle emissions inspections shall be performed in the following counties: Alamance, Buncombe, Cabarrus, Catawba, Chatham, Cleveland, Cumberland, Davidson, Durham, Forsyth, Franklin, Gaston, Granville, Guilford, Harnett, Iredell, Johnston, Lee, Lincoln, Mecklenburg, Moore, Orange, Randolph, Rockingham, Rowan, Stanly, Union, and Wake."

Section 3.6. Effective 1 January 2005, G.S. 143-215.7A(c), as enacted by Section 3.1 of this act and amended by Sections 3.3 through 3.5 of this act, reads as rewritten:

"(c) Motor vehicle emissions inspections shall be performed in the following counties: Alamance, Buncombe, Cabarrus, Catawba, Chatham, Cleveland, Cumberland, Davidson, Durham, Edgecombe, Forsyth, Franklin, Gaston, Granville, Guilford, Harnett, Iredell, Johnston, Lee, Lenoir, Lincoln, Mecklenburg, Moore, Nash, Orange, Pitt, Randolph, Robeson, Rockingham, Rowan, Stanly, Union, and Wake. Wake, Wayne, and Wilson."

Section 3.7. Effective 1 July 2005, G.S. 143-215.7A(c), as enacted by Section 3.1 of this act and amended by Sections 3.3 through 3.6 of this act, reads as rewritten:

"(c) Motor vehicle emissions inspections shall be performed in the following counties: Alamance, Buncombe, Burke, Cabarrus, Caldwell, Catawba, Chatham, Cleveland, Cumberland, Davidson, Durham, Edgecombe, Forsyth, Franklin, Gaston, Granville, Guilford, Harnett, Haywood, Henderson, Iredell, Johnston, Lee, Lenoir, Lincoln, Mecklenburg, Moore, Nash, Orange, Pitt, Randolph, Robeson, Rockingham, Rowan, Rutherford, Stanly, Stokes, Surry, Union, Wake, Wayne, Wilkes, and Wilson."

Section 3.8. Effective 1 January 2006, G.S. 143-215.7A(c), as enacted by Section 3.1 of this act and amended by Sections 3.3 through 3.7 of this act, reads as rewritten:

"(c) Motor vehicle emissions inspections shall be performed in the following counties: Alamance, Brunswick, Buncombe, Burke, Cabarrus, Caldwell, Carteret, Catawba, Chatham, Cleveland, Craven, Cumberland, Davidson, Durham, Edgecombe, Forsyth, Franklin, Gaston, Granville, Guilford, Harnett, Haywood, Henderson, Iredell, Johnston, Lee, Lenoir, Lincoln, Mecklenburg, Moore, Nash, New Hanover, Onslow, Orange, Pitt, Randolph, Robeson, Rockingham, Rowan, Rutherford, Stanly, Stokes, Surry, Union, Wake, Wayne, Wilkes, and Wilson."

Section 3.9. Sections 3.3 through 3.8 of this act become effective only if G.S. 20-183.7 is amended to increase the fee for motor vehicle emissions inspections no later than 31 December 2000. G.S. 143-215.107A(b), as enacted by Section 3.1 of this act, and Section 3.2 of this act are repealed effective 1 January 2001 unless, prior to 1 January 2001, G.S. 20-183.7 has been amended to increase the fee for motor vehicle emissions inspection.

Section 3.10. The Department of Environment and Natural Resources, with the assistance of the Division of Motor Vehicles of the Department of Transportation and the affected parties, shall study issues related to costs associated with the motor vehicle emissions inspection and maintenance program. The Department shall determine what constitutes a reasonable fee for motor vehicle emissions inspections under the current program and under the enhanced program to be implemented pursuant to G.S. 143-215.107A(b), as enacted by Section 3.1 of this act. In determining what constitutes a reasonable fee, the Department shall consider the cost of emissions inspection equipment, the useful life of the equipment, the average period of time during which a purchaser of this equipment is able to amortize this cost, telephone charges incurred in connection with the registration denial program, whether a fee should be charged to reinspect a vehicle that fails an emissions test after repairs to

the vehicle have been made, and whether the State should purchase emissions inspection equipment purchased prior to 10 June 1999 for use in the current program but that will be rendered obsolete by the enhanced program. The Department shall report its findings and recommendations to the Environmental Review Commission on or before 1 February 2000. The Environmental Review Commission, with the assistance of the Fiscal Research Division of the Legislative Services Office, shall evaluate these recommendations. The Environmental Review Commission shall recommend legislation to amend G.S. 20-183.7 to increase the fee for motor vehicle emissions inspections to the 2000 Regular Session of the 1999 General Assembly.

Section 3.11. G.S. 20-183.2 reads as rewritten:

"ß 20-183.2. Description of vehicles subject to safety or emissions inspection; definitions.

(a) Safety. -- A motor vehicle is subject to a safety inspection in accordance with this Part if it meets all of the following requirements:

(1) It is subject to registration with the Division under Article 3 of this Chapter.

(2) It is not subject to inspection under 49 C.F.R. Part 396, the federal Motor Carrier Safety Regulations.

(3) It is not a trailer whose gross weight is less than 4,000 pounds or a house trailer.

(b) Emissions. -- A motor vehicle is subject to an emissions inspection in accordance with this Part if it meets all of the following requirements:

(1) It is subject to registration with the Division under Article 3 of this Chapter.

(2) It is not a trailer whose gross weight is less than 4,000 pounds, a house trailer, or a motorcycle.

(3) It is a 1975 or later model.

(4) It is powered or designed so that it could be powered by gasoline.

(5) It meets any of the following descriptions:

a. It is required to be registered in an emissions county.

b. It is part of a fleet that is operated primarily in an emissions county.

c. It is offered for rent in an emissions county.

d. It is a used vehicle offered for sale by a dealer in an emissions county.

e. It is operated on a federal installation located in an emissions county and it is not a tactical military vehicle. Vehicles operated on a federal installation include those that are owned or leased by employees of the installation and are used to commute to the installation and those owned or operated by the federal agency that conducts business at the installation.

f. It is otherwise required by 40 C.F.R. Part 51 to be subject to an emissions inspection.

(c) Definitions. -- The following definitions apply in this Part:

(1) Emissions county. -- A county in which the State either is required by federal law to conduct emissions testing or has agreed in its State Implementation Plan submitted to the federal Environmental Protection Agency to conduct emissions testing. The State

listed in G.S. 143-215.107A(c) or designated by the Environmental Management Commission establishes the emissions counties pursuant to rules adopted under G.S. 143-215.107(a)(6). pursuant to G.S. 143-215.107A(d) and certified to the Commissioner of Motor Vehicles as a county in which the implementation of a motor vehicle emissions inspection program will improve ambient air quality.

(2) Federal installation. -- An installation that is owned by, leased to, or otherwise regularly used as the place of business of a federal agency."

Section 3.12. G.S. 143-215.107 reads as rewritten:

"ß 143-215.107. Air quality standards and classifications.

(a) Duty to Adopt Plans, Standards, etc. -- The Commission is hereby directed and empowered, as rapidly as possible within the limits of funds and facilities available to it, and subject to the procedural requirements of this Article and Article 21:

(1) To prepare and develop, after proper study, a comprehensive plan or plans for the prevention, abatement and control of air pollution in the State or in any designated area of the State.

(2) To determine by means of field sampling and other studies, including the examination of available data collected by any local, State or federal agency or any person, the degree of air contamination and air pollution in the State and the several areas of the State.

(3) To develop and adopt, after proper study, air quality standards applicable to the State as a whole or to

any designated area of the State as the Commission deems proper in order to promote the policies and purposes of this Article and Article 21 most effectively.

(4) To collect information or to require reporting from classes of sources which, in the judgment of the Environmental Management Commission, may cause or contribute to air pollution. Any person operating or responsible for the operation of air contaminant sources of any class for which the Commission requires reporting shall make reports containing such information as may be required by the Commission concerning location, size, and height of contaminant outlets, processes employed, fuels used, and the nature and time periods or duration of emissions, and such other information as is relevant to air pollution and available or reasonably capable of being assembled.

(5) To develop and adopt emission control standards as in the judgment of the Commission may be necessary to prohibit, abate, or control air pollution commensurate with established air quality standards. The standards may be applied uniformly to the State as a whole or to any area of the State designated by the Commission. This subdivision does not apply to that portion of the National Emission Standards for Hazardous Air Pollutants for asbestos that governs demolition and renovation as set out in 40 C.F.R. ß 61.141, 61.145, 61.150, and 61.154 (1 July 1993 edition).

(6) To adopt, when necessary and

practicable, a program for testing emissions from motor vehicles and to adopt motor vehicle emission standards in compliance with applicable federal regulations. adopt motor vehicle emissions standards; to adopt, when necessary and practicable, a motor vehicle emissions inspection and maintenance program to improve ambient air quality; to require that motor vehicle emissions be monitored while the vehicle is in operation by means of onboard diagnostic equipment (OBD) installed by the vehicle manufacturer; to require manufacturers of motor vehicles to furnish to the Equipment and Tool Institute and, upon request and at a reasonable charge, to any person who maintains or repairs a motor vehicle, all information necessary to fully make use of the onboard diagnostic equipment and the data compiled by that equipment; to certify to the Commissioner of Motor Vehicles that ambient air quality will be improved by the implementation of a motor vehicle emissions inspection and maintenance program in a county. The Commission shall implement this subdivision as provided in G.S. 143-215.107A.

(7) To develop and adopt standards and plans necessary to implement programs for the prevention of significant deterioration and for the attainment of air quality standards in nonattainment areas.

(8) To develop and adopt standards and plans necessary to implement programs to control acid deposition

and to regulate the use of sulfur dioxide allowances and nitrogen oxides (NOx) emissions in accordance with Title IV and implementing regulations adopted by the United States Environmental Protection Agency.

(9) To regulate the oxygen content of gasoline, motor fuels, as defined in G.S. 119-16, to require use of reformulated gasoline as the Commission determines necessary, to implement the requirements of Title II and implementing regulations adopted by the United States Environmental Protection Agency, and to develop standards and plans to implement this subdivision. Rules adopted under this subdivision may specify standards for a particular area of the State that differ from standards specified for other areas as may be necessary to improve ambient air quality within a particular area, achieve attainment or preclude violations of the National Ambient Air Quality Standards, or to meet other federal requirements. Rules may authorize the use of marketable oxygen credits for gasoline as provided in federal requirements.

(10) To develop and adopt standards and plans necessary to implement requirements of the federal Clean Air Act and implementing regulations adopted by the United States Environmental Protection Agency.

(11) To develop and adopt economically feasible standards and plans necessary to implement programs to control the emission of odors from animal operations, as defined in G.S. 143-215.10B.

(12) To develop and adopt a program of

incentives to promote voluntary reductions of emissions of air contaminants, including, but not limited to, emissions banking and trading and credit for voluntary early reduction of emissions.

(13) To develop and adopt rules governing the certification of persons who inspect vehicle-mounted tanks used to transport motor fuel and to require that inspection of these tanks be performed only by certified personnel.

(14) To develop and adopt rules governing the sale and service of mobile source exhaust emissions analyzers and to require that vendors of these analyzers provide adequate surety to purchasers for the performance of the vendor's contractual or other obligations related to the sale and service of analyzers.

(b) Criteria for Standards. -- In developing air quality and emission control standards, motor vehicle emissions standards, motor vehicle emissions inspection and maintenance requirements, rules governing the content of motor fuels or requiring the use of reformulated gasoline, and other standards and plans to improve ambient air quality, the Commission shall recognize consider varying local conditions and requirements and may prescribe uniform standards and plans throughout the State or different standards and plans for different counties or areas as may be necessary and appropriate to facilitate accomplishment of the stated improve ambient air quality in the State or within a particular county or area, achieve attainment or preclude violations of state or national ambient air quality standards, meet other federal requirements, or achieve the purposes of this Article and Article 21.

(c) Chapter 150B of the General Statutes governs the adoption and publication of rules under this Article."

Section 3.13. G.S. 20-183.8F reads as rewritten:

"ß 20-183.8F. Requirements for giving certain emissions license holders notice of violations and for taking summary action.

(a) Finding of Violation. -- When an auditor of the Division finds that an emissions a violation has occurred that could result in the suspension or revocation of an emissions inspection station license, an emissions a self-inspector license, or an emissions a mechanic license, the auditor must give the affected license holder written notice of the finding. The notice must be given within five business days after the violation occurred. The notice must state the period of suspension or revocation that could apply to the violation and any monetary penalty that could apply to the violation. The notice must also inform the license holder of the right to a hearing if the Division charges the license holder with the violation.

(b) Notice of Charges. -- When the Division decides to charge an emissions inspection station, an emissions a self-inspector, or an emissions a mechanic with a violation that could result in the suspension or revocation of the person's emissions license, an auditor of the Division must deliver a written statement of the charges to the affected license holder. The statement of charges must inform the license holder of this right, instruct the person on how to obtain a hearing, and inform the license holder of the effect of not requesting a hearing. The license holder has the right to a

hearing before the license is suspended or revoked. G.S.
20-183.8E sets out the procedure for obtaining a hearing.

(c) Exception for Summary Action. -- The right granted by
subsection (b) of this section to have a hearing before
an emissions a license is suspended or
revoked does not apply if the Division summarily suspends or
revokes the license after a judge has reviewed and authorized the
proposed action. A license issued to an
emissions inspection station, an
emissions a self-inspector, or an
emissions a mechanic is a substantial property
interest that cannot be summarily suspended or revoked without
judicial review."

Section 13.14. G.S. 20-183.8G reads as rewritten:
"ß 20-183.8G. Administrative and judicial review.

(a) Right to Hearing. -- A person who applies for a license
or registration under this Part or who has a license or
registration issued under this Part has the right to a hearing
when any of the following occurs:

(1) The Division denies the person's application
for a license or registration.

(2) The Division delivers to the person a written
statement of charges of an emissions
a violation that could result in the suspension or
revocation of the person's emissions
license.

(3) The Division summarily suspends or revokes the
person's license following review and authorization of the
proposed adverse action by a judge.

(4) The Division assesses a civil penalty against
the person.

(5) The Division issues a warning letter to the person.

(6) The Division cancels the person's registration.

(b) Hearing After Statement of Charges. -- When an emissions a license holder receives a statement of charges of an emissions a violation that could result in the suspension or revocation of the person's license, the person can obtain a hearing by making a request for a hearing. The person must make the request to the Division within 10 days after receiving the statement of the charges. A person who does not request a hearing within this time limit waives the right to a hearing.

The Division must hold a hearing requested under this subsection within three business days after receiving the request unless the person requesting the hearing asks for additional time to prepare for the hearing. A person may ask for no more than seven additional business days to prepare. If the additional time requested is within this limit, the Division must grant a person the additional time requested. The hearing must be held at the location designated by the Division. Suspension or revocation of the license is stayed until a decision is made following the hearing.

If a person does not request a hearing within the time allowed for making the request, the proposed suspension or revocation becomes effective the day after the time for making the request ends. If a person requests a hearing but does not attend the hearing, the proposed suspension or revocation becomes

effective the day after the date set for the hearing.

(c) Hearing After Summary Action. -- When the Division summarily suspends a license issued under this Part after judicial review and authorization of the proposed action, the person whose license was suspended or revoked may obtain a hearing by filing with the Division a written request for a hearing. The request must be filed within 10 days after the person was notified of the summary action. The Division must hold a hearing requested under this subsection within 14 days after receiving the request.

(d) All Other Hearings. -- When this section gives a person the right to a hearing and subsection (b) or (c) of this section does not apply to the hearing, the person may obtain a hearing by filing with the Division a written request for a hearing. The request must be filed within 10 days after the person receives written notice of the action for which a hearing is requested. The Division must hold a hearing within 90 days after the Division receives the request.

(e) Review by Commissioner. -- The Commissioner may conduct a hearing required under this section or may designate a person to conduct the hearing. When a person designated by the Commissioner holds a hearing and makes a decision, the person who requested the hearing has the right to request the Commissioner to review the decision. The procedure set by the Division governs the review by the Commissioner of a decision made by a person designated by the Commissioner.

(f) Decision. -- A decision made after a hearing on the imposition of a monetary penalty against a motorist for an emissions violation or on a Type I, II, or III emissions violation by an emissions license holder must uphold any monetary penalty, license suspension, license revocation, or warning required by G.S. 20-183.8A or G.S. 20-183.8B, respectively, if the decision contains a finding that the motorist or license holder committed the act for which the monetary penalty, license suspension, license revocation, or warning was imposed. A decision made after a hearing on any other action may uphold or modify the action.

(g) Judicial Review. -- Article 4 of Chapter 150B of the General Statutes governs judicial review of an administrative decision made under this section."

PART IV. STATE AGENCY GOALS, PLANS, DUTIES, AND REPORTS; OTHER PROVISIONS

Section 4.1. As used in this Part, alternative-fueled vehicle means a motor vehicle capable of operating on electricity; natural gas; propane; hydrogen; reformulated gasoline; ethanol; other alcohol fuels, separately or in mixtures of eighty-five percent (85%) or more of alcohol by volume; or fuels, other than alcohol, derived from biological materials. For purposes of this Part, a vehicle that has been converted to operate on a fuel other than the fuel for which it was originally designed is not a new or replacement vehicle.

Section 4.2. It shall be the goal of the State that on and after 1 January 2004 at least seventy-five percent (75%) of the new or replacement light duty cars and trucks purchased by the State will be alternative-fueled vehicles or low emission vehicles. The Department of Administration, the Department of Transportation, and the Department of Environment and Natural Resources shall jointly develop a plan to achieve this goal and to fuel and maintain these vehicles. The Department of Administration shall report on progress in developing and implementing this plan and achieving this goal to the Environmental Review Commission on 1 September of each year beginning 1 September 2000. For purposes of this section, a light duty car or truck is one that is rated at 8,500 pounds or less Gross Vehicle Weight Rating (GVWR).

Section 4.3. The Department of Public Instruction, the Department of Transportation, and the Department of Environment and Natural Resources shall jointly develop a draft plan for the purchase of school buses under which, beginning 1 January 2004, at least fifty percent (50%) of the new and replacement public school buses purchased for use in counties with a population of at least 100,000, based on the most recent population estimates prepared by the Office of State Planning, will be alternative-fueled or low emission vehicles. These departments shall invite interested parties to participate in the development

of the draft plan. The draft plan will consider the infrastructure requirements that would be needed to fuel and maintain these buses and the costs and benefits of implementation of the plan, including the impact on ambient air quality. The Department of Public Instruction shall submit the draft plan to the Environmental Review Commission on or before 1 September 2000.

Section 4.4. The Department of Transportation and the Department of Environment and Natural Resources shall jointly develop a draft plan for the purchase of buses under which, beginning 1 January 2004, at least fifty percent (50%) of the new and replacement buses purchased to provide public transportation in counties in which motor vehicle emissions inspections are required to be performed under subsection (c) or (d) of G.S. 143-215.107A will be alternative-fueled or low emission vehicles. These departments shall invite interested parties to participate in the development of the draft plan. The draft plan will consider the infrastructure requirements that would be needed to fuel and maintain these buses and the costs and benefits of implementation of the plan, including the impact on ambient air quality. The Department of Transportation shall submit the draft plan to the Environmental Review Commission on or before 1 September 2000.

Section 4.5. The Department of Transportation, the Department of Commerce, and the Department of Environment and

Natural Resources shall jointly develop recommendations for incentives to increase the use of alternative-fueled and low emission light duty cars and trucks in privately owned fleets. The Department of Environment and Natural Resources shall submit these recommendations to the Environmental Review Commission on or before 1 February 2000. The Department of Environment and Natural Resources shall report on progress in increasing the use of alternative-fueled and low emission light duty cars and trucks in privately owned fleets to the Environmental Review Commission on or before 1 October of each year beginning 1 October 2001.

Section 4.6. The Department of Administration, the Office of State Personnel, the Department of Transportation, and the Department of Environment and Natural Resources shall jointly develop and periodically update a plan to reduce vehicle miles traveled by State employees and vehicle emissions resulting from job-related travel, including commuting to and from work. The plan shall consider the use of carpooling, vanpooling, public transportation, incentives, and other appropriate strategies. The Office of State Personnel shall report on the development and implementation of the plan to the Joint Legislative Transportation Oversight Committee and the Environmental Review Commission on or before 1 October of each year beginning 1 October 2000.

Section 4.7. The Department of Transportation, the Department of Commerce, and the Department of Environment and

Natural Resources shall jointly develop and periodically update a plan to reduce vehicle miles traveled by private sector employees and vehicle emissions resulting from job-related travel, including commuting to and from work. The plan shall consider the use of incentives for both private sector employees and employers, carpooling, vanpooling, public transportation, and other appropriate strategies. The Department of Transportation shall report on the development and implementation of the plan to the Joint Legislative Transportation Oversight Committee and the Environmental Review Commission on or before 1 October of each year beginning 1 October 2000.

Section 4.8. The Office of State Personnel shall implement a policy that promotes telework/telecommuting for State employees as recommended by the report of the State Auditor entitled "Establishing a Formal Telework/Telecommuting Program for State Employees" and dated October 1997. It shall be the goal of the State to reduce State employee vehicle miles traveled in commuting by twenty percent (20%) without reducing total work hours or productivity. The Office of State Personnel shall report on progress in implementing this section to the Environmental Review Commission on or before 1 October of each year beginning 1 October 2000.

Section 4.9. The Environmental Management Commission shall initiate rule making to regulate the emissions of nitrogen oxides (NOx) from complex sources pursuant to G.S. 143-215.109 no

later than 1 October 1999. The Environmental Management Commission shall report on the progress of this rule making as a part of each quarterly report the Commission makes to the Environmental Review Commission pursuant to G.S. 143B-282(b).

Section 4.10. Chapter 136 of the General Statutes is amended by adding a new Article to read:

"ARTICLE 16.

"Planning.

"ß 136-200. Definitions.

As used in this Article:

(1) `Conformity' means the extent to which transportation plans, programs, and projects conform to federal air quality requirements as specified in 40 Code of Federal Regulations, Part 93, Subpart A (1 July 1998 Edition).

(2) `Department' means the Department of Transportation.

(3) `Interface' means a relationship between streams of traffic that efficiently and safely maximizes the mobility of people and goods within and through urbanized areas and minimizes transportation-related fuel consumption and air pollution.

(4) `Metropolitan Planning Organization' or `MPO' means an agency that is designated as a Metropolitan Planning Organization in accordance with 23 U.S.C. ß 134.

(5) `Regionally significant project' has the same meaning as under 40 Code of Federal Regulations 93.101 (1 July 1998 Edition).

(6) `Regional travel demand model' means a model of a region, defined in the model, that is approved by the Department and each Metropolitan Planning

Organization whose boundaries include any part of the region and that uses socioeconomic data and projections to predict demands on a transportation network.

"ß 136-201. Plan for intermodal interface.

When planning a regionally significant transportation project, the Department shall consider design alternatives that will facilitate the cost-effective interface of the project with other existing or planned transportation projects, including highway, airport, rail, bus, bicycle, and pedestrian facilities. The Department of Transportation shall record its consideration of these design alternatives in the planning documents for the project.

"ß 136-202. Metropolitan planning organizations.

(a) Each Metropolitan Planning Organization shall base all transportation plans, metropolitan transportation improvement programs, and conformity determinations on the most recently completed regional travel demand model.

(b) Each Metropolitan Planning Organization shall update its transportation plans in accordance with the scheduling requirements stated in 23 Code of Federal Regulations 450.322 (1 April 1999 Edition).

(c) The Department, the metropolitan planning organizations, and the Department of Environment and Natural Resources shall jointly evaluate and adjust the regions defined in each regional travel demand model at least once every five years and no later than 1 October of the year following each decennial federal census. The evaluation and adjustment shall be based on decennial census data and the most recent populations estimates certified by the State Planning Officer. The

adjustment of these boundaries shall reflect current and projected patterns of population, employment, travel, congestion, commuting, and public transportation use and the effects of these patterns on air quality.

(d) The Department shall report on the evaluation and adjustment of the boundaries of the area served by each Metropolitan Planning Organization to the Joint Legislative Transportation Oversight Committee and the Environmental Review Commission no later than 1 November of each year in which the regions are evaluated and adjusted.

"ß 136-203. Joint study groups.

The Department and the Department of Environment and Natural Resources shall convene a joint study group to examine options to maximize the positive impacts and minimize the adverse impacts on air quality of transportation investments. A joint study group shall be convened for each major travel corridor in which there has been air quality violations within the previous fiscal year or that affects an area in which there has been air quality violations within the previous fiscal year. Each joint study group shall include at least 10 members, half of whom shall be appointed by the Secretary of Transportation and half of whom shall be appointed by the Secretary of Environment and Natural Resources. Each group shall include representatives from the Department and the Department of Environment and Natural Resources, affected units of local government, private businesses, and nonprofit public interest organizations. The

Department and the Department of Environment and Natural Resources shall jointly report on the work, findings, and recommendations of each joint study group to the Joint Legislative Transportation Oversight Committee and the Environmental Review Commission on or before 1 October of each year."

Section 4.11. The Department of Transportation and the Department of Environment and Natural Resources shall make the first joint report required by G.S. 136-203, as enacted by Section 4.10 of this act, on or before 1 October 2000.

Section 4.12. G.S. 143-215.94T(a) is amended by adding a new subdivision to read:

"(12) Tank tightness testing procedures and certification of persons who conduct tank tightness tests."

Section 4.13. G.S. 143B-282(a)(2)h. reads as rewritten:

"h. Governing underground tanks used for the storage of oil or hazardous substances or oil pursuant to Article 21 or Article 21A Articles 21, 21A, or 21B of Chapter 143 of the General Statutes. Statutes, including inspection and testing of these tanks and certification of persons who inspect and test tanks."

PART V. MISCELLANEOUS PROVISIONS

Section 5.1. This act shall not be construed to obligate the General Assembly to appropriate any funds to implement the provisions of this act. Every State agency to

which this act applies shall implement the provisions of this act from funds otherwise appropriated or available to that agency.

Section 5.2. The headings to the Parts of this act are intended as a convenience to the reader and are for reference only. The headings do not expand, limit, or define the text of this act.

Section 5.3. If any section or provision of this act is declared unconstitutional or invalid by the courts, the unconstitutional or invalid section or provision does not affect the validity of this act as a whole or any part of this act other than the part declared to be unconstitutional or invalid.

Section 5.4. Except as otherwise provided in this act, this act is effective when it becomes law.

In the General Assembly read three times and ratified this the 20th day of July, 1999.

s/ Dennis A. Wicker
President of the Senate

s/ James B. Black
Speaker of the House of Representatives

s/ James B. Hunt, Jr.
Governor

Approved 10:50 a.m. this 21st day of July, 1999

Appendix B
Survey Questionnaire

Transportation Demand Management
Program Information and Background

Program Name: _____

Contact Person: _____

Street Address: _____

Mailing Address: _____

Phone: _____

Fax: _____

Email: _____ Website: _____

Information is being requested of you to provide background information to the project team that will visit you to learn more about your program. The following is a list of information we would like to have ready by: _____ so the project team can arrive for an interview and analysis of people in and around your organization. The focus is on current policy and practice (those developed in the last five years), although additional information will be useful as background.

1. Please provide copies of the following:
    a. Organization Chart
    b. Mission Statement of definition or purpose of work
    c. Goals and objectives by year for the last five years
    d. Budget for the last five years (make sure different funding levels and funding sources are shown)
    e. Measurements of effectiveness reported for the last five years as well as any type of program evaluation – accountability that is built into the programs
2. Please provide program history: when it started, what were the services / focus areas, champions (individuals and organizations), expected changes for the next few years. In addition, please answer the following
    a. Are you a (a) Commuter Assistance Program operating within a public transportation authority or city department, (b) Transportation Management Association, (c) Statewide Service – please circle those that apply and give background on them (ordinances, …). In addition, if there is a TMA, please complete the employer information separately from the organization.
    b. Please provide a matrix and supporting information of your program activities (check the activity and complete the information)

- ☐ Carpool Matching / Formation
  - Product (s) used to assist with this activity: _____
  - Measure of Success: _____
- ☐ Vanpool Matching
  - Organization owned: how many are in operation _____
  - Owner operated: how many are in operation _____
  - Employer owned: how many are in operation _____
  - 3rd Party Vanpools: how many are in operation _____

☐ Supporting Activities:

☐ Guaranteed Ride Home

☐ Preferential Parking

☐ Commuter Benefits (please circle: employer, employee)

☐ Flex – time

☐ Staggered work hours

☐ Telecommuting

☐ Bicycle / Pedestrian

☐ Compressed work week

☐ Transit Program: (please describe)

☐ Upass _____

☐ Shuttle Services _____

☐ Pass programs _____

c. Describe your employer activities – Please create a matrix of the following for employers participating in your program:
   i. Employer Name

ii. Contact Name, Title, Phone Number, email

iii. Address

iv. Number of Employees at this site

v. What are their successes and why?

d. Describe your general public activities – Please create a matrix of the following for employers participating in your program:

i. What are their successes and why?

3. Do you have a Board

a. If yes,

i. What is their function? Do they adopt a work plan and budget each year?

ii. Do you have by laws adopted for them?

iii. What information do you report to them?

iv. How often do they meet? How active / supportive are they? (Give examples)

b. If no,

i. Who approves your workplan?

ii. What is your relationship to them?

iii. What information do you report to them?

4. What are the products / programs marketed by your organization for the last five years (by year)? Please provide productivity factors as they relate to these efforts. For example, number of vehicles owned, number of vanpools in operation, number of passengers carried, number of carpool matches provided and so forth.

5. If you operate vanpools, please describe your maintenance and emergency procedures.

6. What market research have you done in the last five years? What were the changes in your program delivery based on this research?

7. Year end activities

a. Who and how do you report them? (please provide copies of the last five years)

Appendix C

Interview Schedule and Participants

TDM Related Agency	Name	Interview Date	Other Information
NCDOT	David King	January 3, 2003	NCDOT Deputy Secretary
Smart Commute	Ruth McCullers	January 6, 2003	External Affairs Manager, CISCO
Smart Commute	Susan Clarke	January 6, 2003	Chair, Smart Commute, IBM
Smart Commute	Jamie Nunnelly	January 6, 2003	Director of Communications, Research Triangle Foundation
Smart Commute	Valerie Broadwell	January 6, 2003	US EPA
Smart Commute	Jill Miller Denning	January 6, 2003	Staff Comm., Research Triangle Institute
Smart Commute	Dick Sloane	January 6, 2003	Resource Recovery Specialist, NIEHS
Smart Commute	Joe Milazzo	January 6, 2003	Executive Director, Regional Transportation Alliance
Nortel	Stephen Jones	January 7, 2003	VP Human Resources, NORTEL
Duke University	Dr. Nannerl Keohane	January 7, 2003	President, Duke University
Duke University	Micheal Palmer	January 7, 2003	Director of Community Affairs, Duke University
NC DHHS	Kathy McGhee	January 7, 2003	Dorthea Dix Campus
City of Durham	Marcia Conner	January 7, 2003	City Manager, City of Durham
City of Durham	Cha'ssem Anderson	January 7, 2003	Transportation Planner, City of Durham
Chapel Hill	Cal Horton	January 7, 2003	Town Manager, Town of Chapel Hill
NCDOT	Dan Thomas	January 8, 2003	NCDOT, Statewide Planning
NCDOT	Thomas Wright	January 8, 2003	Office of State Personnel
NCDOT	Judith Bell	January 8, 2003	Office of State Personnel
NCDOT	Dempsey Benton	January 8, 2003	Chief Deputy Secretary, DENR
NCDOT	Jill Vitas	January 8, 2003	DENR
NCDOT	Carlton Myrick	January 8, 2003	Deputy Secretary of the Dept of Administration
NCDOT	Tamra Shaw	January 8, 2003	NCDOT PTD
BSBSNC	Robert Greczyn	January 9, 2003	President and CEO, BCBS of NC
BSBSNC	Michael Patrick	January 9, 2003	CFM, BCBS of NC
Rural Job Access	Ron Byrd	January 9, 2003	Harnett County DSS
Rural Job Access	Ralph Thurman	January 9, 2003	Transportation Manager, Hart Area Rural Transit System
Rural Job Access	Gayle Worley	January 9, 2003	Transportation Program Consultant, PTD, NCDOT
Rural Job Access	David Williford	January 9, 2003	MJ Soffe

TDM Related Agency	Name	Interview Date	Other Information
Rural Job Access	Michelle Mitchell	January 9, 2003	Pinnacle Staffing Manager, Tyco Plastics
Rural Job Access	Israel Reyes	January 9, 2003	MJ Soffe
Rural Job Access	Johnny Chestnut	January 9, 2003	MJ Soffe
Rural Job Access	Sterling Webster	January 9, 2003	Ramada Inn, Outer Banks (telephone interview)
Rural Job Access	Gayle Overton	January 9, 2003	Comfort Inn, Outer Banks (telephone interview)
Wilmington	Harper Peterson	January 10, 2003	Mayor, City of Wilmington
Wilmington	Dick Scott	January 10, 2003	Board Chair, Wilmington Transit Authority
Wilmington	Albert Eby	January 10, 2003	General Manager, Wilmington Transit Authority
Wilmington	Julia Boseman	January 10, 2003	County Commissioner, New Hanover County
Wilmington	Howard Loving	January 10, 2003	VP Infrastructure, Chamber
Wilmington	Mick Wayne	January 10, 2003	Director of Transportation, County Schools
Wilmington	Al McKenzie	January 10, 2003	Director of Human Resources, City of Wilmington
Wilmington	Ron Moore	January 10, 2003	VP Human Resources New Hanover Regional Medical Center
PART	Larry Williams	January 22, 2003	Mayor of Rural Hall, TAC Chair
PART	Dennis Magovern	January 22, 2003	Special Assistant to the Forsyth County Manager
PART	Greg Turner	January 22, 2003	Assistant City Manager, City of Winston-Salem
PART	Dr. Otis Tillman	January 22, 2003	Piedmont Triad International Airport Authority
PART	Gary Lloyd	January 22, 2003	Employer representative, Wilson-Cooke, former police officer
PART	Sandy Carmany	January 22, 2003	City Council, City of Greensboro, PART Board Chairperson
Asheville	Charles Worley	February 12, 2003	Mayor, City of Asheville
Asheville	Scott Shuford	February 12, 2003	Planning Director, City of Asheville
Asheville	Brownie Newman	February 12, 2003	Western Carolina Alliance
Asheville	Bruce Black	February 12, 2003	Director of Transportation, Asheville Transit System
Asheville	Lou Bissette	February 12, 2003	Former Mayor, Attorney in private practice and chair of citizens group for I-26 committee
Hickory	Tom Carr	February 27, 2003	Executive Director, City of Hickory
Hickory	Keith Stahley	February 27, 2003	Planning Director, City of Hickory
Hickory	Michael Bradshaw	February 27, 2003	Transit Manager, City of Hickory
Hickory	Eric Ben-Davies	February 27, 2003	Transportation Planner, City of Hickory

TDM Related Agency	Name	Interview Date	Other Information
Hickory	Joe Lutz	February 27, 2003	Manager of Government Affairs, Catawba County Chamber of Commerce
Hickory	John Tippett	February 27, 2003	Western Piedmont Council of Governments

Appendix D

Position Related Information – Washington State TDM Office

COMMUTE INFO More>>
» King County Transit Trip Planner
» Puget Sound Traffic Flow Map
» Rideshare Online
» Washington State Ferries

Click the Map for Community Commute and Travel Listings

Click here to enlarge map

TDM
• TDM Success Stories

CONTACTS
• Counties/Jurisdictions
• Puget Sound TDM Resource Center
• CTR Task Force
• State Support
• Services

RELATED TOPICS
• Rail
• Special Needs Transportation
• Transit

Directory: State Support for Transportation Demand Management

Updated 12/26/2002

Statewide policy and support, Olympic Region support

Transportation Demand Management (TDM) Office, Public Transportation and Rail Division
310 Maple Park Avenue
P. O. Box 47387
Olympia, WA 98504-7387

(360) 705-7846
Fax: (360) 705-6862
tripreduction@wsdot.wa.gov

Statewide TDM policy and information on TDM-related projects statewide
Brian Lagerberg (360) 705-7878 lagerbb@wsdot.wa.gov

Budget information for TDM-related projects statewide
Cathy Silins (360) 705-7919 silinsc@wsdot.wa.gov
Brian Lagerberg (360) 705-7878 lagerbb@wsdot.wa.gov

Support for jurisdictions and employers
T. J. Johnson (360) 705-7508 johnstj@wsdot.wa.gov
Matt Love (360) 705-7877 lovem@wsdot.wa.gov

Data about the Commute Trip Reduction Program
Ed Hillsman (360) 705-7887 hillsme@wsdot.wa.gov

Flexpass information for Olympic Region, Northwest Division, and Washington State Ferries
Diana Hendrickson (360) 705-7845 hendrdi@wsdot.wa.gov

Grants and contracts
Hiep Tran (360) 705-7875 tranh@wsdot.wa.gov
Jennifer Wiens (360) 705-7839 wiensj@wsdot.wa.gov

Park and ride lots, including planning
Kathy Johnston (360) 705-7925 johnstk@wsdot.wa.gov

Vanpool leasing
Hiep Tran (360) 705-7875 tranh@wsdot.wa.gov

WSDOT's internal Commute Trip Reduction Program
Patsy Nedrow (360) 705-7916 nedrowp@wsdot.wa.gov
Diana Hendrickson (360) 705-7845 hendrdi@wsdot.wa.gov

Communications and public involvement
Barbara Davis (360) 705-7874 davisb@wsdot.wa.gov

CTR Task Force meetings or requests for documents
Diane Compton (360) 705-7846 comptod@wsdot.wa.gov

Northwest Washington Policy and Support: Seattle and King, Kitsap, Pierce, and Snohomish counties

TDM Resource Center, Northwest Washington Division
401 Second Ave. S, Suite 300
Seattle, WA 98104-2887

(206) 464-5878
Fax: (206) 464-6084

Division-wide TDM policy and projects (including TDM Action Strategy for Central Puget Sound and Regional TDM Roundtable)
John Shadoff (206) 464-5428 shadofj@wsdot.wa.gov

Corridor planning (Including I-405, Trans-Lake Washington, Alaskan Way Viaduct; Interlocal Corridor TDM Agreements)
Jean Mabry (206) 389-3038 mabryj@wsdot.wa.gov

Land use (research and technical assistance)
Sarah Kavage (206) 389-3287 kavages@wsdot.wa.gov

Park and ride lots and HOV system policy and planning
Charles Prestrud (206) 389-3039 prestrc@wsdot.wa.gov

Support for jurisdictions, agencies, transportation management associations
John Shadoff (206) 464-5428 shadofj@wsdot.wa.gov

Communications and public involvement
Melissa Loomis (206) 389-3244 loomism@wsdot.wa.gov

Market development research (such as vanpooling and proximate commuting)
John Shadoff (206) 464-5428 shadofj@wsdot.wa.gov

Appendix E
Statewide TDM Awards Program Examples and the Governor's CommuteSmart Awards

Category: *Ridesharing*

EarthLink, Inc.,
Bellevue

- CTR Program CEO*:
  Garry Betty, Chief Executive Officer
- CTR Program PM*:
  Lori Waters, Facilities Services Manager Seattle
- CTR Program ETC*:
  Dorian Yeager, Security Coordinator Seattle

Listen to one of the radio spots featuring this winner!

Local site is model for others nationwide

For some employers with multiple worksites throughout the United States, it might be difficult to get company management to buy into the idea of a commute trip reduction program. For the EarthLink, Inc. work site of Bellevue, not only has management bought into the idea, the Bellevue worksite has become the standard to which other EarthLink worksites aspire. That is why EarthLink has earned a 2002 Commuter Challenge Diamond Award for ridesharing.

Jan. 22, 2003 Awards Ceremony

Accepting EarthLink's Diamond Award for Ridesharing are Employee Transportation Coordinator Dorian Yeager and Facilities Services Manager Lori Waters.

EarthLink has worked to ensure its commute trip reduction program provides a variety of commute options for employees. In fact, 47% of those employees affected by the CTR law now use ridesharing to get to work rather than driving alone. FlexPasses are provided to all full-time employees for free. Vanpool costs are also covered at 100%, and riders can receive an additional incentive of $25 per month for riding in a vanpool with seven or more people. Carpoolers can enjoy free car washes and a $25 per month incentive if they are in a carpool with four or more riders.

Even those employees who bicycle, walk or rollerblade to work are eligible for incentives. EarthLink will give employees up to $150 to purchase a new bike, $100 to purchase new rollerblades, or even a new pair of walking shoes if they use one of these non-motorized commute options.

All new hires are introduced to the program during their orientation process and can get help to find ridesharing partners or determine the transit routes that work best for them. “The CTR program has certainly reduced the amount of employee turnover among users of the program,” said Employee Transportation Coordinator Dorian Yeager. “People that use the program elements are much less likely to leave EarthLink.” Employees are continually kept up to date on the latest ridesharing information through informational emails, flyers, an internal web site and benefits fairs.

EarthLink has shown its commitment to commute trip reduction efforts through the significant financial investments it has made in ensuring the program continues to grow and thrive. EarthLink created the Rideshare Coordinator position to do just that. With a CTR program tailored to the needs of its employees, Yeager has been able to show corporate management that the vanpool program at the Bellevue site is more cost efficient than independently run programs at other EarthLink worksites throughout the United States.

Commute Program

- Transit and vanpool subsidy
- Showers
- Reserved vanpool parking
- Guaranteed Ride Home
- Internal ridematching
- Flextime and telework

***Some definitions:** An "ETC" is the staff-level employee transportation coordinator responsible for the daily administration of the transportation program; "PM" is the transportation program manager; and "CEO" refers to the top management-level person at the worksite. "SOV" stands for single-occupant vehicle, and "CTR" for commute trip reduction.*

BACK TO LIST OF DIAMOND AWARD WINNERS

BACK TO HOME PAGE

Category: *Ridesharing*

Kenworth Truck Company–Headquarters, Kirkland

- CTR Program CEO*:
  Robert Christensen, General Manager, Kenworth Truck Company and Vice President, PACCAR Inc.
- CTR Program PM*:
  Rennie Wilson, Human Resources Manager
- CTR Program ETC*:
  Michele Wheeler, Senior Human Resources Specialist

Listen to one of the radio spots featuring this winner!

Jan. 22, 2003 Awards Ceremony

Accepting Kenworth Truck Company's Diamond Award for Ridesharing is Human Resources Director Jim Walker.

50% use commute options despite abundant parking and limited transit

Kenworth Truck Company, a division of PACCAR Inc, is a leading manufacturer of heavy and medium duty trucks. With a progressive focus on fuel efficiency and aerodynamics, it should come as no surprise that the company also places a focus on reducing congestion on our roads through an employee commute trip reduction program. Kenworth's commitment has earned it a 2002 Commuter Challenge Diamond Award for ridesharing.

More than 50% of Kenworth employees at the company's Kirkland headquarters have received FlexPasses. More than 22% of the employees regularly use an alternative commute mode instead of driving alone. This percentage is very encouraging given the site's abundance of free parking and lack of easily accessible transit routes. Kenworth provides employees with a variety of subsidy options to meet their specific commuting needs. FlexPasses are offered to employees at no charge, as well as a 60% ferry subsidy. Walkers, bicyclists and carpoolers also are eligible for a monthly subsidy for their use of HOV and non-motorized commute options.

In addition to the subsidies, carpool and vanpool riders also receive free reserved covered parking. Since there is limited covered parking, the fact that HOV users get priority usage and do not have to pay for it, is a significant benefit.

Kenworth's management team has shown their support through their ongoing willingness to finance the program even in a down economy. Aside from being a good corporate citizen, Kenworth benefits from its CTR program because it helps recruit and retain good employees. The company also has made an effort to seek out and work with public agencies to ensure they are able to continue providing their employees with this outstanding benefit.

Commute Program

- Transit and vanpool subsidy
- Reserved HOV parking
- Guaranteed Ride Home
- Internal ridematching
- Flextime

***Some definitions:** An "ETC" is the staff-level employee transportation coordinator responsible for the daily administration of the transportation program; "PM" is the transportation program manager; and "CEO" refers to the top management-level person at the worksite. "SOV" stands for single-occupant vehicle, and "CTR" for commute trip reduction.*

BACK TO LIST OF DIAMOND AWARD WINNERS

BACK TO HOME PAGE

Category: *Ridesharing*

World Vision, Inc.,
Federal Way

- CTR Program CEO*:
  Desmond Capper, Senior Division Director of Corporate Services
- CTR Program PM*:
  Vicki Hulse, Administrative Coordinator to the Senior Division Director
- CTR Program ETC*:
  Cynthia Cronkhite, Administrative Assistant II

Listen to one of the radio spots featuring this winner!

Beating the odds in suburbia

Many employers in suburban locations throughout King County find it difficult to promote ridesharing because of plentiful free parking and little or no easily accessible transit routes nearby. World Vision in Federal Way is one such organization that has beaten the odds and earned a 2002 Commuter Challenge Diamond Award for ridesharing.

Jan. 22, 2003 Awards Ceremony

Accepting World Vision's Diamond Award for Ridesharing are Employee Transportation Coordinator Cynthia Cronkhite, CTR Program Manager Vicki Hulse, and Senior Division Director of Corporate Services Desmond Capper.

World Vision's commute trip reduction program is a good example of what can be done with vanpools and carpools in a suburban setting with very little transit service. Some employees have wanted to ride the bus in the past but were unable to because there were no stops within walking distance. The organization found that carpooling was a good solution, allowing employees to use an alternative commute mode when transit was not an option.

The organization provides a 50% subsidy to employees who vanpool or ride the bus. Showers and lockers are available to those who bicycle or walk to work, and all employees who use alternative commute modes have access to the Guaranteed Ride Home program so they can quickly and easily get home in case of an emergency. Monthly drawings for Commuter Bonus Plus Vouchers are also held to further reward those employees who rideshare, bicycle or walk to work.

A commuter center located in the lunchroom keeps employees informed of all their commute options. Employees also have access to information on the rideshare program through World Vision's intranet site which includes a transportation page. Forms to sign up for carpools and drawings are available here as well as links to RideshareOnline.com and other transit agencies. The transportation coordinator also provides zip code matching each month for those employees looking for carpool partners.

New employees are provided with a complete packet of information explaining the ridesharing programs available at World Vision as well as an application to sign up as a carpooler. “People are told about our program from the time they are first hired. Many are glad the rideshare options are offered and take advantage of them soon after they start working,” said Employee Transportation Coordinator Cynthia Cronkhite. “The employees are glad to receive subsidies for their bus and vanpool costs, and it is always exciting to them to be chosen as a winner in the monthly drawings.”

The management of World Vision understands the importance of alternative commute options. The rideshare program not only provides important benefits to employees, it also gives the organization an opportunity to show their environmental stewardship. Management further supports the program by participating with other employers in networking events all with the intent to further develop World Vision’s commute trip reduction program.

Commute Program

- Transit and vanpool subsidy
- Showers and lockers
- Reserved HOV parking
- Guaranteed Ride Home
- Internal ridematch service
- Flextime and telework

***Some definitions:** An “ETC” is the staff-level employee transportation coordinator responsible for the daily administration of the transportation program; “PM” is the transportation program manager; and “CEO” refers to the top management-level person at the worksite. “SOV” stands for single-occupant vehicle, and “CTR” for commute trip reduction.*

BACK TO LIST OF DIAMOND AWARD WINNERS

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King County employers recognized at Governor's CommuteSmart Awards

Six King County employers were recently among the 15 winners statewide at the Governor's CommuteSmart Awards in Olympia. In addition, four other area employers were also nominated for the awards.The winners were chosen by the Governor's Commute Trip Reduction Task Force and the Washington State Department of Transportation, as state leaders in reducing single occupancy vehicles on our roadways, reducing pollution and fossil fuel consumption, as well as improving the quality of life. Congratulations to all the nominees and recipients of the 2002 Governor's CommuteSmart Awards.

King County CommuteSmart Winners

CH2M HILL
Children's Hospital & Regional Medical Center
Federal Detention Center, Seattle
Navigant International Northwest
SAFECO
Trendwest Resorts

Additional King County Nominees

City of Seattle
First Choice Health, Inc.
KPFF Consulting Engineers
Puget Sound Regional Council

BACK TO COMMUTER CHALLENGE HOME PAGE

COMMUTE & TRAVEL INFO

MOST REQUESTED

» Amtrak *Cascades*
» Puget Sound Traffic Flow Map
» Rideshare Online
» Washington State Ferries

LOCAL INFORMATION

Click the map for commute and travel information for a specific area.

Click here to enlarge map

COMMUTE & TRAVEL

• Accessible Transportation
• Airplane
• Bicycle
• Bus
• Carpool
• Compressed Work Week
• Ferry
• Traffic & Roads
• Train
• Vanpool
• Walk
• Work from Home
• Commute & Travel Homepage

2003 CommuteSmart news release

2003 Winners and 2003 Nominees

2002 Winners

2001 Winners

2000 Winners

1999 Winners

1998 Winners

On Wednesday, June 11th, the Washington State Department of Transportation announced the winners of the 2003 Governor's CommuteSmart Awards at a ceremony at the Evergreen State College in Olympia. The awards recognize the Washington State employers with the most successful programs encouraging the use of buses, carpools, vanpools, bicycling, walking, working from home, and compressed work weeks.

By promoting alternatives to driving alone, funding subsidies and incentives and providing on-site services, each of the nominated and winning organizations serve as role models for Commute Trip Reduction efforts.

Washington State's Commute Trip Reduction Law was adopted during the 1991 legislative session and incorporated into the Washington Clean Air Act. The goals of the program are to reduce traffic congestion, air pollution and petroleum consumption through employer-based programs that decrease the number of drive-alone commute trips.

Over 1,100 worksites currently participate in the Commute Trip Reduction program in Washington, affecting almost 500,000 employees.

For more information about starting a Commute Trip Reduction program at your worksite, call the Department of Transportation's Transportation Demand Management Office at 360-705-7846.

Appendix F
Florida's Commuter Assistance Program

Approved:

Effective: September 24, 2002
Office: Transit
Topic No.: 725-030-008-g

_____
Thomas F. Barry, Jr., P.E.
Secretary

COMMUTER ASSISTANCE PROGRAM

PURPOSE:

To establish procedures and guidelines to the implementation of the Department's Commuter Assistance Program, identify effective employer-based transportation demand management (TDM) strategies, foster development of public/private partnerships, and fund appropriate eligible recipients to carry out commuter assistance program projects.

AUTHORITY:

Chapters 187 and 341, Florida Statutes (F.S.)

SCOPE:

The requirements or processes related to this procedure affect the State Public Transportation Office, District Offices and recipients of funds administered as part of the commuter assistance program.

DEFINITIONS:

Agency Annual Work Plan - An annual written plan submitted by agencies requesting state participation in local ridesharing projects or Transportation Management Associations (TMAs) and/or Transportation Management Organizations (TMOs). This plan identifies project goals, objectives and related project information, and serves in evaluating a project's progress and success.

Annual Summary Report and Survey - An annual summary report and survey administered by regional or local commuter assistance services. The summary report analyzes the success of the agency efforts for the year. The survey is used to verify monitoring and reporting data. The survey is to be done annually or biannually at the discretion of the District, and with the agreement of the Central Office.

Central Office - For the purposes of this procedure, it means the Department of Transportation, Public Transit Office.

District Office - For the purposes of this procedure, it means the Department of Transportation, District Public Transportation Office.

District Work Plan - An annual written plan identifying District program goals and direction. This serves as a guide for the Districts and grantees in developing individual project work plans. Service to Enterprise Zones should be considered.

Eligible Project Recipients - Local governments or their designees including: Metropolitan Planning Organizations, Regional Planning Councils, Transportation Authorities, or Community Transportation Coordinators designated pursuant to ***Chapter 427, F.S.***, are eligible recipients of matching grants. Private for-profit and private-not-for-profit corporations that have been selected pursuant to Chapter 287, Florida Statutes, may receive funds to operate Regional Commuter Services projects. Transportation Management Associations and/or Transportation Management Organizations created pursuant to ***Chapter 617, F.S.***, may also receive grants.

Enterprise Zone - Areas that chronically display extreme and unacceptable levels of unemployment, physical deterioration, and economic disinvestments, pursuant to ***Chapter 290, F.S.***.

Local Commuter Services - Public or private agencies providing commuter assistance services to a defined local area, usually serving one municipality or county. The local commuter service organization will provide ridematching, marketing, survey, Transportation Management Association and/or Transportation Management Organization support and/or other needed coordination.

Memorandum of Understanding - This is a written agreement between the Regional Commuter Service or the Local Commuter Service office and each existing Transportation Management Association and/or Transportation Management Organization. The agreement outlines the responsibilities of each agency in achieving the goals of the Commuter Assistance Program. The District shall approve the Memorandum of Understanding. This document should be reviewed and updated on a three-year cycle.

Regional Commuter Services - Multi-county agencies, that can be private-not-for-profit corporations, funded by the state, and established to provide the basic support for a network of smaller, localized Transportation Management Association/Transportation Management Organization within a specified region of the state. To the extent feasible, these programs should be placed at an existing regional entity (i.e., regional planning council, metropolitan planning organization, transit agency, or other private agency). This does not preclude other arrangements better suiting community needs. These projects are developed cooperatively between the Central Office and the District and/or Districts involved. Regional Commuter Services will provide ridematching, marketing, survey and other support as determined by the Districts and this procedure.

Statewide Commuter Assistance Annual Report - A report compiled by the Central Office detailing Commuter Assistance activities statewide. This report will include all the data and monitoring compliance figures provided by the projects to the District offices. This report will cover the preceding calendar year.

Telecommuting - A work arrangement, by which selected employees are allowed to do the normal duties and responsibilities of their positions with computers or telecommunications, at home or an alternative worksite other than the employees' usual place of work.

Transportation Demand Management (TDM) Strategies - A set of measures designed to reduce the number of trips made by single occupant vehicles and enhance the regional mobility of all citizens. These strategies can include but are not limited to: traditional ridesharing (carpooling & vanpooling); public transportation, alternative work hours (flextime, compressed work week, etc.), non-motorized transportation (bicycle and pedestrian modes); development and implementation of shuttle services; priority/preferential parking for ridesharers; promotion and distribution of discounted transit passes; and fostering telecommuting programs.

TDM Clearinghouse - Is a service of the Department, currently operated by the Center for Urban Transportation Research, which provides technical support for the Department, local governments and emerging Transportation Management Association and/or Transportation Management Organizations. Services include but are not limited to: strategic planning assistance, evaluations and survey assistance, training, TDM Resource Center and periodic newsletters. The Central Office has monitoring and fiscal responsibilities for the clearinghouse. Major requests need to be coordinated between the District and Central offices before approval to proceed.

Transportation Management Associations / Transportation Management Organizations - The terms Transportation Management Associations or Transportation Management Organizations have been used interchangeably. For the purposes of this procedure the acronym TMA will be used. TMAs are public/private partnerships formed so that employers, developers, building owners, central business districts, downtown merchant associations, and government entities can work collectively to establish policies, programs and services to address local transportation problems. TMAs realize their potential in addressing traffic congestion, air quality, and occasionally, employment issues through TDM strategies. TMAs are established within a limited geographical area to address the transportation management needs of their members. TMAs are expected to obtain private sector financing in addition to public funding.

Transportation Management Initiatives (TMIs) - These are hybrid entities that are the first step in a process in which employers and other interested parties consider collective actions for improving the means to carry people and/or goods. TMIs are usually not legally constituted and may be projects or field offices of larger organizations with broader missions. TMIs are frequently led by an advisory committee of the private sector in partnership with the public sector to solve transportation problems.

GENERAL

Coordinated use of existing transportation resources can provide a responsive, low cost alternative for alleviating urban highway congestion, improving air quality and by that reducing the need for costly highway improvements. The commuter assistance program focuses on the single occupant commuter trip that is the greatest cause of peak hour highway congestion. A coordinated effort to provide alternatives to these commuters, using existing or low cost resources, can be beneficial to the development of public transit statewide and the Department's priority efforts to relieve traffic congestion, improve air quality and to assure energy conservation. The State's Commuter Assistance Program encourages a public/private partnership to provide brokerage services to employers and individuals for: carpools, vanpools, buspools, express bus service, subscription transit service, group taxi services, heavy and light rail and other systems designed to increase vehicle occupancy.

The program encourages the use of transportation demand management strategies including: employee trip reduction planning, Transportation Management Associations, alternative work hour programs, telecommuting, parking management, and bicycle and pedestrian programs.

PROGRAM MANAGEMENT AND IMPLEMENTATION

(1) CENTRAL OFFICE responsibilities shall include:

(a) Maintain continuing communication with the District Offices on matters regarding the Commuter Assistance Program.
(b) Develop and maintain program policies and procedures.
(c) Monitor compliance with established procedures.
(d) Provide training and technical support to Districts and local programs as required, through contracts like the TDM Clearinghouse.
(e) Stay current on national and international methods for promotion of commuter alternatives and transportation demand management, and providing this information to the Districts.
(f) Provide any necessary support for demonstration projects that are statewide or regional in scope or require staffing in excess of district capabilities.
(g) Assure the coordination and implementation of support programs (Transit Corridor and Park and Ride).
(h) Compile data provided by the District into Annual Report.
(i) Provide the latest transit trends and performance measurements.

(2) DISTRICT OFFICE responsibilities shall include:

(a) Maintain communication with the Central Office on program status and implementation.

(b) Establish and maintain communications with local public and private organizations to advise them of the availability of Department financial and technical assistance programs for commuter assistance and transportation demand management.
(c) Establish specific and achievable program objectives for the District, based upon information from local and regional programs. Develop the Annual District Work Plan including project-funding needs for the next two years and assuring that the commitment of Department funds is consistent with the established production schedule. The District Work Plan provides the framework and direction for the commuter assistance activities funded by the District.
(d) Assure the provision of technical assistance in the development of commuter assistance services.
(e) Provide and manage grants to local agencies and the private sector for the implementation of Commuter Assistance Projects. This includes ensuring that grantees or contractors comply with Joint Participation Agreement or contract requirements, and that requirements of this procedure are included in the Joint Participation Agreement or contract.
(f) Ensure that appropriate application of commuter alternatives further the development of public transportation projects in the Districts and the inclusion of private transportation providers.
(g) Perform annual reviews of each agency's progress to determine the effective implementation of the Agency Annual Work Plan. Modifications to the Agency Annual Work Plan will be documented.
(h) Prepare a District Annual Local or Regional Commuter Assistance Service Report summarizing each agency's progress in the implementation of the Agency Annual Work Plans. The report will include the written reports submitted by the agencies detailing successes, mandatory reporting measures, problems and plans. These reports are due in the Central Office by March 1st of each year and will cover the preceding calendar year. This information is necessary for the maintenance of data for the Statewide Commuter Assistance Annual Report. Reports from established TMAs (more than three years old) may be submitted annually and will also be included in those District reports.
(i) Participate, as appropriate, on the Boards of Directors of private-not-for-profit TMAs and Regional Commuter Services Corporations.

(3) Issues not specifically mentioned in this procedure, nor with statewide implications, are left to the discretion of the individual District.

(4) The Districts shall program Commuter Assistance Projects in coordination with the Central Office, the appropriate metropolitan planning organization, local agencies and the private sector to ensure statewide programming to optimize available funding sources.

1. ELIGIBLE PROJECT COSTS

(a) Program administration and operational costs including: salaries, marketing materials, advertising, computerized matching, reporting, purchase of promotional

items as part of public information and education campaigns for the promotion of alternatives to single-occupant vehicle travel (promotional items must first be cleared through the FDOT Comptroller) and other project related costs.
(b) Computer hardware and software necessary to establish trip-matching services, where not redundant or sharing could be a more efficient use of equipment.
(c) Specialized demonstration projects of statewide or regional impact designed to show innovative approaches to commuter assistance.
(d) Other capital purchases for the accomplishment of program objectives.
(e) Other operating expenses for the accomplishment of program objectives, such as a Guaranteed Ride Home Project or vanpool administration.

2. ELIGIBLE GRANT RECIPIENTS

Local governments or their designees including Metropolitan Planning Organizations, Regional Planning Councils, Transportation Authorities, or Community Transportation Coordinators designated pursuant to ***Chapter 427, F.S.***, are eligible recipients of matching grants.

Although funds may be used to administer these projects within local government, recipients should be encouraged to consider subcontracting services to the private sector. Grants may be made to private organizations pursuant to ***Chapter 617, F.S.***

3. FUND PARTICIPATION

(a) Funding for this program will be allocated to the Districts based on a statewide assessment of Commuter Assistance Program need. Allocation requests identified in the Annual District Work Plan will be given first priority.
(b) The Department is authorized to fund up to 100 percent of the eligible costs of commuter assistance projects determined by the District to be regional in scope and application or statewide in nature.
(c) The Department's participation in a local project cannot exceed the amount of local participation.
(d) State funding participation in Federal Transit Administration funded projects shall be at the level defined in ***Chapter 341, F.S.***
(e) The Department's participation in Federal Highway Administration funded projects shall be at the levels required for the particular highway system fund involved according to ***Section 339.08(2), F.S.***
(f) Specific match rates are identified in the Work Program Instructions.

4. WORK PLANS

Each District shall develop an annual work plan for its District Commuter Assistance Program. This plan will detail program goals and objectives for the period October 1

through September 30. The district work plan shall identify annual program goals and emphasis areas, targets for regional and local commuter assistance services, and targets for TMAs. Plans shall be submitted to the Central Office by October 1 of each year and will be used in the development of the Department's Work Program.

5. PROJECT TYPES

5.1 Regional or Local Commuter Services operated by government agencies, transit operators or private contractors under contract to the Department shall be administered in the following manner:

5.1.1 Each agency shall submit an annual work plan consistent with Department and regional goals. The work plan will be incorporated as a "Special Consideration of the Department" in all Joint Participation Agreements, and shall include, at a minimum:

(a) An organization chart identifying all personnel funded by this project
(b) Measurable program goals and objectives with milestones to determine progress in stated emphasis areas consistent with District work plans
(c) A marketing plan identifying market penetration and client service targets
(d) An annual project budget identifying expenses and revenues by source

5.1.2 All commuter assistance service agencies receiving state funding will be required to monitor and report to the District office the following data on an annual basis or as the Joint Participation Agreement may stipulate:

(a) Number of commuters requesting assistance
(b) Number of commuters switching from single occupant vehicles
(c) Number of agency vans in service, and other coordinating agency vans that are participating in the rideshare-matching program (where applicable)
(d) Number of vehicle trips eliminated for all commuters participating in the commuter assistance program
(e) Number of vehicle miles eliminated for all commuters participating in the commuter assistance program
(f) Number of employer contacts and employers participating
(g) Description of major accomplishments
(h) Number of parking spots saved / parking needs reduced
(i) Amount of commuter costs saved

Definitions for each reporting category are provided in ***Attachment A***.

5.1.3 Regional and local commuter assistance service programs shall administer an annual survey to collect and verify data for reporting requirements. This requirement may be waived by the District if the agency can show statistically accurate follow-up compiled in a monthly or quarterly manner. Requests to waive this requirement will be reviewed by the Central Office. Surveys may be accomplished in-house or contracted

out and must not have a sample error greater than 5% and a confidence interval no less than 95%. Refer to survey guidelines in ***Attachment A***.

5.1.4 All projects shall be programmed according to the latest Work Program Instructions and according to the provisions of ***Chapter 341, F.S.***, as follows:

(a) If the local eligible recipient has taken action to secure or designate federal funds as a funding source for a project, in which case the appropriate federal match ratio applies.
(b) If the Central Office has indicated on a project-by-project basis that other funds (e.g., Transit Corridor) can be reasonably anticipated for the project, the appropriate match ratio associated with such funds shall apply.
(c) If the project is regional in scope and no regional financing mechanism exists, the project is eligible to be programmed up to 100% state participation.

5.2 Transportation Management Associations operated as public/private partnerships:

5.2.1 Funding may be provided to TMAs organized as private-not-for-profit corporations, in cooperation with local government, that are established according to local comprehensive plans, other locally adopted plans or regional commuter assistance program goals.

5.2.2 State funds may be granted in the following ratio:

TMAs will be eligible for continued funding at the lesser of $75,000 or 50% of their total budget, provided they are meeting the performance criteria outlined in their existing Joint Participation Agreement. Board member in- kind contributions may count toward local match requirements. However, in-kind contributions must have the prior approval of the District Office. Districts may use ***49 CFR 18.24 (Title 49, Code of Federal Regulation, Part 18.24***, ***"Uniform Administration Requirements for Grants and Cooperative Agreements to State and Local Governments"*** deals with matching and cost sharing. This Federal regulation can be accessed at www.access.gpo.gov/nara/cfr as guidance in determining allowable in-kind contributions. Funding may exceed the $75,000 limit, if the District can justify the need and verify that any commuter assistance program within the District will not be adversely affected. Variation from these levels is permitted with prior consultation with the Central Office.

5.2.3 Grants supporting TMAs may be made directly to the incorporated organization or to the appropriate local governmental agency for pass-through to the TMA following the current Joint Participation Agreement procedure. TMAs receiving these grants shall include the Department as an ex officio member of its Board of Directors during the grant period.

5.2.4 To be eligible for state funding a TMA must send the Department a detailed Agency Annual Work Plan, articles of incorporation as a private not for profit body,

bylaws, geographical boundaries, trip management goals, a financing plan, an institutional structure, and potential membership estimates. Future year work plans will be required. A TMA shall use the Department's TMA Self Evaluation program annually. The District will coordinate with the TMA in the selection of criteria to be used in the Self Evaluation. Results of the evaluation will be reported to the District office annually. Records of services received from regional commuter assistance programs should be maintained. A summary of these activities shall be included with the invoice progress reports provided to the District office pursuant to the requirements outlined in the Joint Participation Agreement.

5.2.5 No TMA will be funded unless the District office has determined that its Agency Annual Work Plan is consistent with regional commuter assistance program plans, metropolitan planning organization transportation plans, local comprehensive plans and regional strategic policy plans.

5.2.6 Funds granted to TMAs under this program are for administrative, planning, marketing and operational purposes only. The Department will not participate in the acquisition of computerized ride matching capabilities unless this service is not available through a regional or local commuter assistance program.

5.2.7 Special projects and operations (shuttles, vanpools, guaranteed ride home programs, transit discounts, etc.) may be funded on a 50% state ratio to established TMAs (more than three years old).

6. PROJECT FILES

The District shall maintain the official project files, which at a minimum, shall include or have readily accessible:

(a) All Joint Participation Agreements and/or Contracts and a copy of any amendments or supplements thereto.
(b) A copy of each invoice and accompanying progress report presented for payment by the grant/contract recipient
(c) Documentation of any official on-site visits and annual evaluations scheduled by the District.
(d) An inventory of all capital acquisitions including description, state participation, current location, and cost when acquired.
(e) All pertinent correspondence regarding the project.
(f) A copy of the agency annual audit (report) performed according to the ***Public Transportation Joint Participation Agreement Procedure****, No. 725-000-005, and* ***Recipient/Subrecipient Single Audit Procedure****, No. 450-021-001*.

7. TRAINING

The basic TDM training is mandatory for all Department Commuter Assistance Program managers and Commuter Assistance Program agency directors. Additionally, the State

Commuter Assistance Office periodically offers training classes that provide the most recent technical assistance and program information available.

8. FORM ACCESS

There are no required forms associated with this procedure.

ATTACHMENT A

1. EVALUATION MEASURE DEFINITIONS

Number of Commuters Requesting Assistance: This is the number of people that request assistance of some sort including:

Carpool match list, Vanpool match list or formation assistance, Transit route and/or schedule information, Telecommuting information, Bicycle route and/or locker/rack information

Number of Commuters Switching Modes: This is the number of people that actually use the information you provide to change their current Single Occupant Vehicle mode to carpooling, vanpooling, transit use, telecommuting, walking and/or bicycling.

This information can be gathered by doing sample survey of commuters assisted on a monthly basis by either phone or mail. Every month contact a random sample of the commuters assisted the previous month to see how many actually used the information you provided. Extrapolate survey results to estimate total. It is recommended that actual data be used where available.

Number of Vans In Service: Report the number of commuter vans on the road and/or the number of vanpoolers. These are vans that are operated either by the CAP agency or any other coordinating agency that participates in the commuter rideshare-matching program operated by the CAP.

Number of Vehicle Trips Eliminated: Using the follow-up survey data or actual data multiply the frequency of alternative mode use by the estimated number of commuters using a shared mode or telecommuting.

Number of Vehicle Miles Eliminated: Using the follow-up survey data take the average trip length times the frequency of use times the number of formations.

Employer Contacts: When reporting include the number of employees at each site. Report number of employer contacts and provide a brief summary of methods of contact used.

Major Accomplishments: When reporting consider the following categories: new transit services initiated and/or improved; education programs initiated; transportation planning initiatives; guaranteed ride home projects initiated; or other implementation activities.

Parking Spots Saved / Parking Needs Reduced: Determined by the number of people using alternative modes at each employment site.

Commuter Costs Saved: Multiply vehicle mile eliminated by the average cost per mile. The American Automobile Association is a good source for the average cost per mile.

2. DISTRICT OPTIONAL EVALUATION MEASURE DEFINITIONS

Gasoline Saved: Multiply the vehicle miles eliminated by the average miles per gallon figure from the American Automobile Association.

Emissions Reduction: Multiply the vehicle miles eliminated by the emission factors for your area. Emission factors are available from the Department of Environmental Protection.

Information Materials Distributed: Categories may include but are not limited to:

Brochures, Information packets, Posters, Surveys

Special Events: Categories may include but are not limited to:

Transportation Fairs. Commuter Fairs, Special Promotions

Media / Community Relations: Categories may include but are not limited to:

Number of Public Service Announcements shown, Number of newspaper articles, Number of news stories, Number of magazine articles

3. SURVEY GUIDELINES

This is meant to be a guide for agencies choosing to administer an internal annual survey.

Probability Samples: Probability samples are those in which everyone has an equal chance or probability of being chosen. The assumption is that the people who are selected are believed to be just like those who are not selected. Types of techniques associated with probability sampling include: simple random sampling, stratified random sampling, and simple random cluster sampling.

Sample Size: Once the sampling methodology has been decided upon, a sample size may be determined. Three issues must be addressed when determining sample size:

sampling error (the degree of precision desire), stratification (the examination of sub segments of the population), and confidence levels (the degree of certainty with which the sample is representative of the population).

Sampling Error: The degree of precision in a survey sample can be determined by calculating the standard error. Specifically, as the sample size increases, the standard error associated with that sample decreases. The issue of precision with a survey sample is an important one.

Stratification: In a stratified sampling, the surveyor draws a sample with a pattern of important characteristics that is the same as the population's. If 80 percent of employees in the target area drive alone to work while 10 percent carpool, then the sample should have the same distribution of modes.

Confidence Levels: The confidence level indicates the degree to which the researcher is confident that the sample is representative. Frequently, the 95 percent confidence level is chosen, meaning that there is a 95 percent chance that the sample and the population will look alike, and a 5 percent chance that it will not.

Example: The following example illustrates the process of determining sample size. Suppose a new Transportation Management Area (TMA) wants to determine mode split for employees in its area. Census data for the region suggests that the carpool rate is 15 percent. The confidence level was chosen to be 95 percent and the standard error 2.5 percent. The following equation is used:

$N = (p)\ (1\text{-}p) / (te/z)^2$
N = unadjusted sample size
p = estimated proportion or incidence of cases
te = tolerable error
z = the standard score of a given confidence level

A new statistic used in this calculation is a tolerable error (te), which is defined as the standard error times the t- statistic (1.96 for a 95 percent confidence interval). Given that p = 0.15, z = 1.96, and the standard error = 0.025, te = 0.05. Thus:

$N = (0.15)\ (1 -).15) / (0.05 / 1.96)^2$
N = 196

To adjust for the population, the following equation is used:

N'= N / (1 + (N / P))
N'= adjusted sample size
N= initial sample size (calculated above)
P= target population

For this scenario, if the target population in the study area is 5,000, then:

N'= 196 / (1 = (196 / 5,000))
N'= 188

Finally, the sample size is determined by accounting for anticipated sample size. Many researchers report results with a 30 percent response rate. Therefore, this example will also anticipate the same.

N = N' / X
n = final sample size
N'= adjusted sample size
X = anticipated response rate

Given this equation, the final sample size for this example is:

n = 188 / 0.30
n = 629

Therefore, in order to determine mode split for its area, the new TMA must distribute 629 surveys to employees of its members. If the TMA is using the simple random sampling technique it would randomly choose 629 names from its database. However, if the TMA wants to use the stratified random sampling technique, the above process should be repeated for each organization. This will allow the TMA to construct a profile of each employer in its area that is statistically significant, and will ensure a statistically significant sample for the entire region as well.

4. EVALUATION MEASURE REPORTING GUIDANCE

This is an example of how an agency could go about compiling the data needed for the reports they are required to submit to the Department. **This is meant to be an example, <u>not</u> a prescribed format.** However, calculations must be based on known real data and mathematically correct. In our example the agency will be called ICAP (Imaginary Commuter Assistance Program).

Number of Commuters Requesting Assistance

ICAP reports the following for Month X:
100 carpool match lists processed
5 new vanpool clients

Number of Commuters Switching Modes

ICAP sends mail back cards to all 100 clients requesting carpool match lists. All the information needed from the vanpoolers is available in their fare payment and registration records.

25 mail back cards are returned by carpoolers with 5 clients reporting that they are carpooling.
5: 100 = 5%

Phone calls are made to the remaining 75 carpool clients. Of those ICAP reaches 30 and finds out 5 more clients are carpooling.

5 + 5: 100 = 10%

Number of Vans in Service

ICAP has 20 vans currently in service. There are additional 45 vans that in service and available for rideshare-matching recommendations. These vans are located in the local transit agency, which has 10 vans in service, and two private van-leasing companies, which have 35 vans in service.

Number of Vehicle Trips Eliminated

The average frequency of carpooling reported on the mail back cards was 3 days a week. The frequency of the vanpoolers is 5 days a week.

10 x 3 x 2 = 60 trips eliminated by carpoolers / week
5 x 5 x 2 = 50 trips eliminated by vanpoolers / week

Vehicle Miles Eliminated

The average carpool trip distance is 10 miles one way. The average vanpool distance is 35 miles one way.

10 x 60 = 600 miles eliminated / week
35 x 50 = 1,750 miles eliminated / week

To get the total number eliminated for the report, multiply by the number of weeks in the report.

Employer Contacts

ICAP reports the following contacts:

13 employers contacted by letter
10 employers contacted by phone
5 employers visited in person

Major Accomplishments

ICAP expanded the guaranteed ride home program to include 3 new employers.

Parking Spaces Saved / Parking Needs Reduced

15 parking spaces saved this period.

Commuter Costs Saved

The American Automobile Association estimates that the average cost per mile for ICAP=s service region is $.40.

$.40 x 600 = $240 saved / week by carpoolers
$.40 x 1,750 = $700 saved / week by vanpoolers.

Appendix G
TDM Characteristics and Strategies

Characteristics of TDM Strategies

			Enabling Authority				Implementing Authority					
Strategy	Application Market Area	Time Frame To Implement	State	Regional	City/County	Transit Agency	State	Regional	City/County	Transit Agency	Private Sector	Non Profit
Alternative Mode Support Strategies												
Public Education and Promotion	All	Short-long	X	X	X	X	X	X	X	X	X	X
Ridematching Services	Urban & suburban commute trips not well served by transit	Short-medium		X	X	X		X	X	X	X	
Transit Services	Urban & suburban	Short-long		X	X	X		X	X	X	X	
Vanpool Services	Longer urban & suburban commute trips	Short-medium	X	X	X	X	X	X	X	X	X	
Custom Transit Services	Suburban	Medium		X	X	X		X	X	X	X	
Non-Motorized Mode Support	Short commuting & non-commute	Short-long	X	X	X		X	X	X		X	X
HOV Facilities	Congested corridors	Medium-long	X		X		X		X	X		
Park & Ride Lots	Congested corridors	Short-medium	X		X	X	X		X	X	X	
Carsharing	Urban & some suburban areas	Medium								X	X	X
Worksite-Based Strategies												
Monetary Incentives	Commuters	Short								X	X	
Alternative Work Schedules	Commuters	Short									X	
Guaranteed Ride Home	Commuters	Short								X	X	
Parking Management	Commuters	Short-medium			X						X	
Facility Amenities	Large employers and sites in areas with little mixed-use development	Short-medium			X						X	
Transportation Management Associations	Multi-employer sites and areas	Short-medium							X		X	

Characteristics of TDM Strategies													
			Enabling Authority				Implementing Authority						
Strategy	Application Market Area	Time Frame To Implement	State	Regional	City/County	Transit Agency	State	Regional	City/County	Transit Agency	Private Sector	Non Profit
Land Use Strategies													
Compact Residential Development	Urban & suburban	Short-long			X				X		X	X
Compact Employment and Activity Centers	Urban & suburban	Short-long			X				X		X	X
Mixed Land Uses	Urban & suburban	Medium-long			X				X		X	X
Connectivity	Existing or developing suburban areas	Medium	X		X		X		X		X	X
Transit/Pedestrian Friendly Urban Design	Urban & suburban	Short-long	X		X				X	X	X	X
Parking Management	Urban & suburban	Short-long			X				X		X	X
Jobs/Housing Balance	Regional, urban & suburban	Short-long		X	X			X	X		X	
Providing Affordable Housing	All areas	Short-long	X	X	X			X	X		X	X
Development Impact Mitigation	Developing areas	Medium	X		X				X		X	
Public Policy & Regulatory Strategies													
Trip Reduction Ordnances	Congested or rapidly growing areas	Medium	X		X				X	X	X	
Access Priority/Restriction	Highly congested facilities or centers	Long	X		X				X			
Support of New Institutional Relationships	All areas	Short-medium	X		X			X	X	X	X	X

Characteristics of TDM Strategies													
			Enabling Authority				Implementing Authority						
Strategy	Application Market Area	Time Frame To Implement	State	Regional	City/County	Transit Agency	State	Regional	City/County	Transit Agency	Private Sector	Non Profit
Telecommunications Strategies													
Information Services	Any geographic location	Short-medium					X	X	X	X	X	X
Internet-Based Strategies (teleshopping)	Any location or market	Short-medium					X	X	X	X	X	X
Telecommuting (telework)	Any location or market	Short-medium					X	X	X	X	X	X
Pricing Strategies													
Parking Pricing	Dense urban areas; jurisdictional or areawide application	Medium-long	X		X		X	X	X		X	
Gas Tax Increase	Statewide or local: all vehicle trips	Short-long	X	X	X		X	X	X			
Road/Congestion Pricing	Congested routes, road segments or regions	Long	X		X		X		X			
VMT Tax	Statewide or local/regional; all vehicle trips	Medium-long	X		X		X	X	X			
Transit and Vanpool Fare Subsidies	Within operations area; low income, elderly, students	Short-medium				X	X		X	X	X	

Appendix H
Durham's Trip Reduction Program, Durham, NC

COMMUTE TRIP REDUCTION PROGRAM

WHEREAS, traffic congestion in Durham County has created, and will continue to create highways that are overcrowded and present a dancer to the health, safety, and welfare of citizens; and

WHEREAS, ozone levels in Durham County have reached increasingly unhealthy levels, especially during the summer months, leading to the probable violation of federal air quality standards; and

WHEREAS, Session Law 1999-328 sets a goal for the State of North Carolina to reduce emissions of nitrogen oxides from all sources by at least 25% by July 1, 2009 and to reduce the growth of vehicle miles traveled in the State of North Carolina by at least 25% of that growth that would otherwise occur by July 1, 2009; and

WHEREAS, pursuant to N.C.G.S. §§ 153A-121 and 153A-134, the Board of Commissioners has the authority to regulate businesses and employers located in the County of Durham; and

WHEREAS, the Board of Commissioners has determined that it is necessary to mitigate the impact of traffic by regulating businesses which produce significant levels of traffic and congestion due to the number of employees working for the businesses; and

WHEREAS, in order to provide for an orderly process, and due to limited resources to operate the program, it is necessary for the implementation of this program to cover more than one fiscal year.

NOW, THEREFORE, THE BOARD OF COMMISSIONERS FOR THE COUNTY OF DURHAM DOTH ORDAIN:

1) That the Durham County Code of Ordinances is hereby amended by adding, an article, to be numbered Article V. of Chapter 24, which article reads as follows:

Article V. Commute Trip Reduction Program

Sec. 24-116. Creation of Commute Trip Reduction Program.

1. There is hereby created a program to address the issue of traffic congestion in Durham County. In implementing this program, the County may contract with another governmental or quasi-governmental agency to provide for the efficient and effective provision of services and reviews as set out hereafter.

2. The purpose of the program shall be to provide education and consultative services to businesses, industries, and the general public on alternatives to the use of single occupied vehicles to commute to and from work; to provide information on travel demand reduction strategies, which are designed to reduce congestion on the roadways of Durham County; to gather statistical data on transportation usage; to set goals on reduction of peak period

single occupancy vehicle use and average commute trip reduction in vehicle miles traveled; and to provide, to the extent practicable, a program of incentives, including yearly recognition, for businesses and industries which excel in reducing traffic congestion by implementing exceptional travel demand management programs.

Sec. 24-117. Community Goals.

It is recognized that the reduction of single occupancy vehicle use, especially during peak hours, is an important goal for the entire Durham County community in order to reduce congestion on the highways, and to reduce the levels of ozone in the air. The following community-wide goals are therefore adopted:

Year	Percent of Alternate Mode or Non-Peak Commute Trips	Average Commute Trip VMT Reduction (%)
2001	3	2
2002	6	4
2003	9	6
2004	12	8
2005	15	10
2010	20	15

Sec. 24-118. Requirements for Major Employers.

In each year, each Major Employer shall:

1. Provide each full time, part-time, contract, or other employee with information on Alternate Mode options and required travel reduction measures and related incentives. This may include, but is not limited to: any bus routes and schedules, information on any ride share programs, and any bicycle routes. This information shall also be provided to new employees, as described above, at the time of hiring.

2. Participate in a survey and reporting effort, as directed and scheduled by the Lead Agency staff. All surveys or other reporting efforts as approved by the Lead Agency shall represent at least 65% of the total number of employees of the Major Employer. The results of the survey or other reporting efforts which are accurate, verifiable and comparable to a survey for determining single occupancy vehicle use during peak periods and vehicle miles traveled, and as approved by the Lead Agency, shall be used to determine if the traffic congestion and reduction targets have been achieved. Employee participation and trip reduction shall be based on the total number of employees. If a 65% response rate is achieved in the employee survey, then the employer may extrapolate survey results to represent the non-responders.

3. Prepare and submit a travel reduction plan to Lead Agency staff. The Lead Agency staff will assist in preparing the required plans when requested to do so by the employer. Major Employers shall submit plans according to a schedule set by the Lead Agency. If not notified earlier by the Lead Agency, Major Employers shall submit plans by December 31 of each year. One plan may be submitted for each Major Employer, which

addresses the travel reduction measures for all of the facilities located in Durham County. Each Major Employer shall set its own good faith goals and shall work toward achieving the community goals set forth herein. The plan shall contain the following elements:

A. The name, address, e-mail address, and phone and fax number of the formally designated Transportation Coordinator.

B. A description of employee information programs designed to achieve the designated transportation reduction goals and other travel reduction measures which have been completed to date or during the previous year.

C. A description of travel reduction measures to be undertaken by the Major Employer in the upcoming year of the plan. The following measures may be included:

a. Participate in a commuter matching service to facilitate employee Ridesharing for work trips.

b. Provision of vans for Vanpooling.

c. Subsidized Carpooling, or Vanpooling, which may include payment for fuel, insurance, or parking.

d. Use of company vehicles for Carpooling.

e. Provision of preferential parking for Carpool or Vanpool users which may include close-in parking or covered parking, facilities.

f. Reduction of on-site employee parking or redesignation of existing parking for pooling employees.

g. Subsidized bus fares.

h. Construction of special loading and unloading facilities for transit, Carpool, and Vanpool users.

i. Cooperation with the City or County of Durham in construction of sidewalks or bicycle routes for the work site.

j. Provision of bicycle racks, lockers, and showers for employees who walk or bicycle to and from work.

k. Provision of a special information center, including a web pace on the company's Internet site, where information on Alternate Modes and other travel reduction measures will be available.

l. Establishment of a work-at-home program, including telecommuting, for employees.

m. Establishment of a program of adjustable work hours, which may include compressed workweeks and employee selected starting and stopping, hours. Work hour adjustments should not interfere with or discourage use of ridesharing, and transit.

n. Establishment of a program of parking incentives and disincentives; Such as a fee for parking and/or a "rebate" for employees who do not use the parking, facility.

o. Implementation of other measures designed to reduce Commute Trips such as provision of day-care facilities, restaurant, or emergency ride home services.

D. A Travel Reduction Plan shall meet all the following criteria:

1. The plan shall designate a Transportation Coordinator.

2. The plan shall describe a mechanism for routine distribution of Alternate Mode transportation information to employees.

3. The plan shall accurately and completely describe current and planned travel reduction measures.

4. The plan shall state the travel reduction goals adopted by the Major Employer, including both Alternate Mode or Non-Peak Commute Trips and Average Commute Trip VMT Reduction.

Sec. 24-119. Approval Process.

1. After the Major Employer's proposed travel reduction plan is received, the lead agency shall have 60 days to object to any component of the plan, otherwise the plan is automatically approved. Any such objection shall be based solely on a failure to include a required component in the plan or an obvious mistake in the plan. If the lead agency objects, the plan is not approved and shall be returned to the employer with appropriate comments for review and revision. The employer will then have fifteen work days to resubmit the required plan. Any Major Employer who fails to submit a travel reduction plan, or pay the processing fee, shall be referred to the County Manager by the Lead Agency for possible enforcement action.

2. A processing fee in the amount of two hundred dollars ($200) shall be submitted annually with the travel reduction plan.

Sec. 24-120. Multi-jurisdictional Advisory Board.

A. There is hereby created a Multi-jurisdictional Advisory Board. The Board shall be composed of up to twenty members, one-half of whom shall be representatives of Major Employers, which shall be appointed by the Board of County Commissioners and by each of the City or Town Councils which have allowed this ordinance to be enforced in its jurisdiction or enacted a substantially similar ordinance and have entered into an inter-local government cooperation agreement with the County of Durham, other approving jurisdictions, and the Lead Agency for the administration of this or a substantially similar ordinance. The Board of Commissioners shall appoint the initial four members of the Advisory Board with each additional municipality or political subdivision appointing four members each. Each member shall serve a three-year term with two of the four members from each appointing body serving an initial two-year term in order to provide for staggered terms.

B. The Multi-jurisdictional Advisory Board shall provide guidance to the Lead Agency in implementing and managing the Congestion Management Program. The Advisory Board shall further provide information on congestion management to the County Manager and the Board of County Commissioners, and shall make recommendations to the Board of County Commissioners as to the performance of the Lead Agency.

C. The Multi-jurisdictional Advisory Board shall make an annual report to the Board of County Commissioners and to each of the City or Town Councils which have allowed this ordinance to be enforced in its jurisdiction or enacted a substantially similar ordinance and have entered into an inter-local government cooperation agreement with the County of Durham for the administration of this or a substantially similar ordinance.

Sec. 24-121. Civil penalties.

Any Major Employer who fails to conduct the survey, or other reports as approved by the Lead Agency, of employees as provided herein or who fails to submit a Travel Reduction Plan, as provided herein, shall be subject to a civil penalty in the amount of one hundred dollars ($1 00.00) per week for each week in which the Major Employer fails to comply with this provision, up to a maximum of one thousand dollars ($1,000.00). The County Manager or his designee shall have authority to assess the civil penalty as provided herein. If the Major Employer fails to pay the civil penalty within a reasonable time as determined by the County Manager or his designee, the County Attorney shall have authority to file a suit for the collection of the civil penalty.

Sec. 24-122. Review of Effectiveness of Ordinance.

The Multi-jurisdictional Advisory Board after consultation with the Lead Agency, if other than the County, shall report to the Board of Commissioners, the Durham City Council and Chapel Hill Town Council, if the two municipalities have allowed this ordinance to be enforced in their jurisdictions or enacted a substantially similar ordinance and have entered into an inter-local government cooperation agreement with the County of Durham for the administration of

this or a substantially similar ordinance, and to other jurisdictions which have enacted a substantially similar ordinance and have entered into an inter-local government cooperation agreement as set forth in Sec. 24-120, by December 31, 2002 on the effectiveness of this Ordinance, and shall, as part of this report, make recommendations for changes in the Ordinance or implementing program as deemed appropriate.

Sec. 24-123. Definitions.

1. "Alternate Mode" means any mode of commute and transportation other than the single occupancy motor vehicle, including telecommuting.

2. " Travel Reduction Plan" means a plan submitted by a Major Employer that meets the requirements as set forth in this article.

3. "Carpool" or "Vanpool" means two or more persons traveling in a light duty vehicle (car, truck, or van) to or from work.

4. "Peak Commute Trip" means a trip taken by an employee to or from work during peak hours.

5. "Commute Trip" means a trip taken by an employee to or from work.

6. "Commuter Matching Service" means any system, whether it uses computer or manual methods, which assists in matching employees for the purpose of sharing rides to reduce drive alone travel.

7. "Employer" means a sole proprietor, partnership, corporation, unincorporated association, cooperative, joint venture, agency, department, district, or other individual or entity, either public or private, that employs workers. However, the term "employer" shall not include the State of North Carolina, the United States of America, or any agency thereof.

S. "Full-time equivalent (FTE) employees" means the number of employees the employer would have if the employers work needs were satisfied by employees working 40 hours per work week. The number of full-time equivalent employees for any employer is calculated by dividing the total number of annual work hours paid by the employer, including work hours paid to contract or other workers whether or not considered employees of the major employer, by 2080 work hours in a year.

9. "Lead Agency" means a governmental or quasi-governmental agency shall evaluate Major Employer's travel reduction plans and the results achieved by the Major Employers due to the implementation of the plans, and shall provide consultative and educational programs for businesses, industries, and the general public.

10. "Major Employer" means an employer who employs, during, a 24 hour period, 100 or more full-time equivalent employees with at least 50 employees at a work site for at least six months during the year. Not included in this calculation shall be any employee who is required

by the nature of his work to daily use a personal owned vehicle in his work or is required to commute using, a vehicle owned by the employer.

1 1. “Mode" means the type of conveyance used in transportation including, single occupancy motor vehicle, ride share vehicle (Carpool or Vanpool), transit, bicycle, and walking.

12. "Non-Peak Commute Trip" means a trip taken by an employee to or from work during hours which are not Peak Hours.

13. "Motor Vehicle" means every device in, upon or by which any property is or may be transported or drawn upon a highway by mechanical means including car, van, bus, motorcycle, and all other motorized vehicles.

14. "Peak Hours" mean the hours between 7:00 AM and 9:00 AM or 4:30 PM and 6:30 PM.

15. "'Ridesharing 'means transportation of more than one person for commute purposes, in a motor vehicle, with or without the assistance of a commuter matching service.

16. "Transit" means a bus or other public conveyance system.

17. "Transportation Coordinator" means a person designated by employer as the lead person in developing and implementing a travel -reduction plan. The Transportation Coordinator shall act as the agent for the Major Employer for purposes of this ordinance.

18. "Travel Reduction Plan" means a written report outlining, travel reduction measures, which will be submitted annually by each Major Employer.

19. "Travel Reduction Program" means a program, implementing a travel reduction plan by an employer designed to achieve predetermined reductions in commute trips and vehicle miles traveled through various incentives and disincentives.

20. "Vehicle Occupancy" means the number of occupants in a motor vehicle including the driver.

21. "Vehicle Miles Traveled"(VMT) means the average (mean) number of miles traveled by a motor vehicle for commute trips.

22. "Work Site" means a building or any grouping, of buildings located within Durham County, which are physically contiguous parcels of land or on parcels separated solely by private or public roadways or rights-of-way, and which are owned or operated by the same employer.

2) The provisions of this ordinance are severable, and should any section or part hereof be declared unconstitutional or void, the rest and remainder of the ordinance shall remain in full force and effect.

3) The effective date of this ordinance shall be July 1, 2000, except for Sec. 24-118, which shall be effective only as to Major Employers with 400 or more employees on
July 1, 2000, shall be effective as to Major Employers with 200 or more employees on July 1, 2001, and shall be effective as to the remaining Major Employers on July 1, 2002.

This the 28' day of February, 2000.

NORTH CAROLINA **AGREEMENT TO EXTEND**
DURHAM COUNTY

THIS AGREEMENT TO EXTEND is made and entered into by and between the COUNTY of DURHAM, a political subdivision of the State of North Carolina, (hereinafter "COUNTY"), and the CITY OF DURHAM, a municipal corporation, (hereinafter "CITY"). The date this Agreement commences is July 1, 2003.

WITNESSETH:

WHEREAS, the City and County entered into an Interlocal Cooperation Agreement for the Commute Trip Reduction Program (hereinafter "Interlocal Agreement") dated July 1, 2000; and

WHEREAS, pursuant to Section III of said Agreement, entitled "Duration; Extension', the term of the Agreement was three year, ending June 30, 2003, which term may be extended year to year for 2 additional years without further action by the respective governing bodies of the City and County, by written agreement signed by the City Manger and County Manager.

NOWTHEREFORE, the City and County, through their respective Managers, hereby agree as follows:

1. By this written Agreement to Extend pursuant to Section III of the Interlocal Agreement the parties agree to extend the term for one year from July 1, 2003 to June 30, 2004.

2. The Interlocal Agreement shall remain in full force and effect to the extent not inconsistent with this Agreement to Extend.

IN TESTIMONY WHEREOF, the County of Durham has caused these presents to be signed in its name by its County Manager, and the City of Durham, has caused these presents to be signed in its name by its City Manager, the day and year first written above.

COUNTY OF DURHAM

_____
Michael M. Ruffin, County Manager

ATTEST:

_____
Gary E. Umstead,
Clerk to the Board

(SEAL)

CITY OF DURHAM

_____
Marcia Conner, City Manager

ATTEST:

_____
Ann Gray,
City Clerk

(SEAL)

Appendix I
Advances in Technologies

CHARLOTTE OBSERVER SUNDAY, MARCH 2, 2003

Steering hybrid cars into the mainstream

Boosting their appeal to families with kids could be the key

BY BRAD Foss, Associated Press

VIENNA, Va. — Francine Rosenberger is not a tree hugger. The 35-year-old securities lawyer does not empathize with rants against gas-guzzling vehicles and, truth be told, has no moral opposition to parking a second SUV in her driveway.

Yet there she was at her local Toyota dealership recently peeking under the hood of a Prius, sizing up the gas-electric car designed for high fuel efficiency and low emissions.

What prompted Rosenberger to shop around for an eco-friendly car? A state law that permits hybrid owners to drive Solo in high-occupancy lanes during rush hour. "That saves me time, which is worth more than anything," said the Arlington, Va., mother of two infants, whose eight-mile com mute can take 45 minutes. "The gas mileage is just a bonus."

Toyota Prius owner Lyie Brown of Spotsylvania County, Va., a commander in the Naval reserves, says breezing past rush-hour traffic jams in the restricted commuter lane makes a hybrid vehicle a worthwhile investment.

ROBERT A. MARTIN - ASSOCIATED PRESS PHOTO

Salesmen at the dealership, Koons Toyota, and crosstown rival Rosenthal Honda say pragmatism often trumps idealism among buyers of gas-electric cars, and they should know:

Koons and Rosenthal lead the nation in hybrid sales to consumers. As automakers try to figure out how to give hybrids *mainstream* appeal, marketing gurus suggest paying more attention to the needs of people like Rosenberger, the soccer moms of tomorrow.

As one marketing executive put it, hybrid technology will either flourish like cell phones or languish like e-books.

Hybrids are powered by a gasoline engine and an electric motor attached to a battery. The electric motor kicks in at low speeds in the Prius and during acceleration in Honda's Civic Hybrid. The battery recharges when the engine is running and when the driver steps on

the brakes. Both cars cost a few thousand dollars more than comparable conventional models, but they get more than 45 miles per gallon.

Prius salesman Dan Scanlan says gas-electric vehicles represent "the beginning of the end for OPEC," an allusion to the argument that hybrids help reduce the country's dependence on foreign oil. But the former radio reporter's sales pitch is otherwise devoid of political or environmental commentary, focused instead on gee-whiz features, such as how the gas-powered engine shuts down when the car stops.

Scanlan also tries to portray hybrid owners as just like everyone else. One moment he's checking the oil of an electric green Prius as Rosenberger looks on, the next he's telling her about a hybrid owner who enjoys an extra hour of sleep now that he uses the HOV lane.

If hybrids are to gain wider acceptance - they made up less than 1 percent of all car sales last year automakers will need "to make these cars practical for families with kids," said Jon Berry, senior research director at New York based market research firm Roper ASW and co-author of "The Influentials," a book about trend-setting consumers.

That means putting gas-electric engines into larger vehicles, bringing down the cost and improving the somewhat sluggish performance - goals the major automakers are working on. Honda learned some of these lessons last year when it introduced the four door Civic Hybrid, which quickly outsold its original hybrid, the two-door Insight, even though the Insight runs about 20 miles; farther on each gallon of gas.

If Virginia consumers are any barometer, a bill in Congress that seeks to give passenger-less hybrids access to HOV lanes nation wide could boost interest around major metropolitan areas. (Arizona already exempts hybrid owners from HOV restrictions.)

Construction has begun on Charlotte's first HOV lanes. They will be on Interstate 77, from just north of uptown to the future Interstate 485 in north Mecklenburg. The lanes should open in fall 2004.

For now, hybrids are on the fringe, a transportation alternative popular with environmentalists, technology buffs and movie stars. About a third of all hybrids are bought in California.

Last year, domestic hybrid sales grew 77 percent to more than 36,000 vehicles. Executives at Honda and Toyota expect combined U.S. sales to reach nearly 40,000 in 2003.

Prius owner Lyle Brown of Spotsylvania County, Va., a 43-year-old Naval reserves commander, says practicality isn't the only reason to own a hybrid.

He told about driving through a hip neighborhood in the nation's capital, when another Prius pull ed up beside him at a red light In side that car were a guy in his 20s and. a pretty woman about the same age. Brown, wearing his khaki-colored Navy uniform, wasn't feeling particularly cool.

That changed, he said, as "the long-haired guy kind of looks down at his car, then he looks down at my car and he nods"

Appendix J

Programs of Excellence

Samples of TDM initiatives from around the country featuring their accomplishments and quantifiable achievements of their significant program efforts.

Measures, Markers and Mileposts, Washington State Department of Transportation, May 31, 2003

There also needs to be a focus on performance-based management efforts. Sample information is included along with the Washington State's "Gray Notebook" as referenced above.

Travel Demand Management (TDM) – Success Stories

Seattle Way-To-Go Household Car Reduction Program (www.cityofseattle.net/waytogo)
Way to Go, Seattle is a new initiative to show people they can save money and make their communities more livable by making more conscious transportation choices, just as they do now with recycling and water conservation. Below is an article and news release about two of the program's trail projects.

"Program to Get Seattleites Out of Second Cars Successful"
Seattle Times, Saturday, March 10, 2001

They rode bicycles or car-pooled or took the bus. They saved up errands and ran them in one trip. They walked to the grocery store or to the kids' soccer match. And, ultimately, they saved themselves hundreds of dollars and avoided dumping 3 tons of greenhouse gas into the atmosphere.

What those 22 Seattle families did not do was use their second cars.

"I didn't think I could do it, says Sharon Griggins-Davis, a Queen Anne resident. "We'd got into some very bad habits of relying on that car."

Hers was one of the families that volunteered to give up their second cars for six weeks as part of a city-sponsored experiment.

As volunteers for "Way to Go, Seattle, the families agreed to take $85 a week from City Hall in exchange for promising to get by with one automobile. Just to be sure, the city recorded their odometer readings.

Participants also agreed to keep journals of how they got around.

Based on city calculations, taking 22 cars off the roads for six weeks saved each family an average of more than $70 per week - even allowing for bus and taxi fares - officials said. It also led to 1,700 fewer car trips through local neighborhoods, 8,100 fewer car-miles and prevented 6,500 pounds of carbon-dioxide emissions - the gas that causes global warming.

"This was not a scientific survey, said Mayor Paul Schell. "It was an educational experiment into how we can do better with what we have."

Some of the families found the task too difficult and reverted to their second cars when the program ended, city officials said. But most said they learned how easy it is to get along with one car. One family has sold its second car and others plan to.

"With two cars, there is always the temptation to use a car when you really don't need it, said Malva Slachowitz, a Ballard participant. "But we learned some things. When we made a shopping list, it was a serious list. When we went on a family outing, we would stop and do an errand."

The experiment appears to have been successful enough to justify another one, Schell said.

Way to Go Seattle! Families Park Their "Extra" Car; All Save Money, Some Give Up Car For Good
News Release, Mayor Paul Schell, September 22, 2001

23 Seattle families completed a City of Seattle pilot program to see if people could get along without their extra car for six weeks. The results are impressive. At least four families liked it so much that they're selling the car. Some families didn't need to participate in the program to be convinced. By determining the cost of owning their car on the City's website, they sold their extra car without even participating in the program!

"We can all take small steps to improve our transportation system," said Mayor Paul Schell. "These families have proven that we can make choices about how to get around and enjoy spending less time in our cars."

All the families in the study saved money, and most saved about $64 per week. The all found they could get around on transit, walking, bicycling and taking taxis when needed for about $21 a week, far less than the $85 per week cost of an average second car. Most families tell us they will continue to take the bus or ride their bike, and think about whether they need to drive to where they want to go.

"We hope more people will see they don't need that extra car," said Jamae Hoffman, project manager. "Families making smart decisions about transportation can cut down on vehicle trips, congestion, gasoline use and, of course, air pollution."

The best experience for Richard Kielbowitz and Linda Lawson of the Hawthorne Hills neighborhood was "watching the price of gas rise for other people". "When we heard reports of traffic jams, we counted our blessings that we were not caught up in them," they said. After participating in the program, Kielbowitz and Lawson sold their second car.

"Before I would have driven north for movies and shopping. Now, I head downtown on the bus," said Lori Goodwin of the Queen Anne neighborhood. "It was a fun experience. Same movies, same shopping, but it was wonderful not to have to deal with a huge parking lot."

Seattle's Strategic Planning Office paid the participating families $85 per week for keeping a daily dairy of their transportation activities and expenses during the six weeks they did not use their extra cars. Families were able to use the $85, the national average cost of owning and operating a second car, for bus fares, joining a Carsharing service, or taxi when needed. Most families spent only about $21 getting around without a car, saving an average of $49 per week. As a result the 23 families made nearly 200 fewer car weekly trips totaling 1,260 miles of travel avoided.

What comes next? Seattle's Strategic Planning Office plans to use these results to encourage others to think about how much it costs them to own and operate their cars, and decide if they, like other families, would rather have the money. The goal of this project is to demonstrate ways to ease neighborhood traffic and vehicle pollution.

Walking, Biking Surpass Driving in Vancouver (www.gvrd.bc.ca)

More people are now moving about by foot and bike than by car in Vancouver, British Columbia, according to a survey by the Greater Vancouver Regional District. Auto trips have actually dropped five percent, the report says. Vancouver City Councilor Gordon Price says, "Though some may find it difficult to believe, there are actually places on the peninsula with less vehicle

congestion than five years ago." Vancouver is famous for its commitment to planning, and every City Council since the early 1990s has stated that the city's transportation priorities would be walking and cycling, followed by transit, goods movement, and cars. "A new way of living is happening in Vancouver as we become the city we said we wanted," Price says. "Great cities are first of all places where most people can walk - and Vancouver is on its way to becoming one of those places."

Hasselt, Belgium Reduces Automobile Travel With Free Transit

(CNN, 2000) 68,000 people live in the Belgium town of Hasselt; another 200,000 people commute in and out every day. Faced with rising debt and traffic congestion, the mayor decided to abandon plans to build a third ring road around the town. Instead, he closed one of the two existing ring roads, planted trees in its place, laid more pedestrian walkways and cycle tracks, increased the frequency and quality of the bus service, and announced that public transport would be free of charge.

A year later the use of public transport has increased by a staggering 800%. The merchants are happy because business has increased; there are fewer accidents, fewer road casualties and there has been an increase in social activity. The same day that the town made the buses free, they also slashed local taxes – the habitants of Hasselt are now paying less than they were 10 years ago. More people are attracted to Hasselt because it is easier to get there, and the extra income has reduced the local taxes. One of the reasons the measure was adopted was a shortage of funds - the city did not have enough money to expand its roads. Free buses were a cheaper alternative, and it worked. The city had been slowly losing population, but since the new measures were adopted, the population has been rising 25 times faster than it was shrinking. Hasselt has been showered with international awards and prizes for the innovative way it has tackled congestion and pollution.

Commute Trip Reduction Programs

Pioneer Pacific Property Management (www.bctransit.com/traveloptions)
Pioneer Pacific Property Management's Station Tower, located at a SkyTrain station in Surrey (a suburb of Vancouver, British Columbia) is home to more than 700 employees of 30 different organizations. By working together, Station Tower has created an extremely effective program. Nearly 50 percent of Station Tower's employees use transportation alternatives.

Known as TravelChoices, the program was commissioned by Intrawest Corporation, the developer of the complex. Each organization in the building has a TravelChoices representative who provides time to administer the program. The trip reduction program enabled Intrawest to reduce the number of parking spaces required by 50 spots. At about $11,000 per spot, that meant $500,000 in savings. The program includes the following features:

- Showers and secure bike lockers are provided for cyclists.
- TravelChoices members have free access to the Gateway fitness facilities, including exercise equipment, showers and lockers.
- A ride-matching service links potential carpool partners within the complex.
- Reserved, preferential parking is available for carpools and vanpools.
- TravelChoices members get guaranteed ride home insurance.
- The TravelBucks incentive program gives its members one TravelBuck for each day they use alternative transportation to and from work.
- Prizes include free coffee, transit FareSaver Tickets, ski passes and rental car certificates.

"Working a trip reduction program into the planning stages of a development is a strategy more property developers should use. It saves money, it's environmentally friendly and it presents potential tenants with another reason to choose your site." Glenda Onstad, Senior Property Manager, Pioneer Pacific Property Management

Alameda County Congestion Management Program (www.accma.ca.gov)

The Alameda County (East San Francisco Bay area, including suburban and rural areas) Congestion Management Program enlisted four employers to provide financial incentives to encourage reduced driving. The table below summarizes the results at the four worksites. The program managers conclude that financial incentives alone typically reduce automobile commute trips by 16-20%, and significantly more if combined with other TDM strategies.

Table 2 **Alameda County Commute Incentive Program**

	Alameda	**Albany**	**Oakland**	**Pleasanton**
Incentive offered	$1.50/day	$2.50/day	$40/mo transit pass	$2.00/day
Average combined fuel savings and financial benefit.	$268/year	$381/year	$407/year	$282/year
Eligible Employees	573	130	400	380
Participants before	12 (3%)	7 (5%)	11 (3%)	147 (40%)
Participants after	108 (19%)	30 (23%)	93 (23%)	130 (34%)

Ernst & Young (www.wageworks.com)

The accounting and management firm Ernst & Young offers a pre-tax commuter transportation and parking benefits to its employees in partnership with WageWorks, starting in 2001. This is projected to save employees 40% of their commuting and work-related parking costs, and reduce the firm's payroll expenses.

"Adding commuter benefits to our innovative benefits offerings is just one more reflection of Ernst & Young's commitment to make the firm a great place to work," says vice chairman of human resources, James L. Freer. "When we surveyed a group of employees regarding what benefits they value, a pre-tax commuter program was the most frequent enhancement by far, with 62% of the respondents asking for it. We are pleased to offer such a program that will make our people's commute to work a bit easier."

CH2M Hill

Upon moving into new offices in the Seattle suburb of Bellevue, WA, the 430 employees of the engineering firm of CH2M Hill were offered $40 per month if they walked, bicycled, carpooled or took transit to work; or free parking if they drove alone. The firm's drive-alone rate declined from 89% to 54%, and stayed there, while the percentage biking or walking increased from 1% to 17% (see table below). With parking demand down by 39%, the firm's problem of 'too many parkers for too few spaces' disappeared. This approach reduced costs to the company, reduced traffic and pollution, while increasing tax revenue.

	Before	After
Drive Alone	89%	54%
Carpool	9%	12%
Bus	1%	17%
Bike, Walk	1%	17%

Car Free Planning

Bogota Car Free Day (www.sinmicarroenbogota.com and in English www.alcaldiabogota.gov.co/sinmicarroenbogota/sinmicarroeng.htm)
The city of Bogota, Columbia first established an official Car Free Day on February 24th, 2000, organized by Mayor Enrique Peñalosa and The Commons, an international environmental organization. This was one of the first Car Free days organized in a developing country. The event was successful and highly popular, and as a result the organizers won the prestigious Stockholm Challenge Award (www.challenge.stockholm.se). Below is the mayor's summary:

> "It was a formidable achievement of Bogata's citizens. A city of seven million inhabitants functioned well without cars. This exercise allowed us to catch a glimpse of what must be the transportation system of the city in ten or fifteen years: an excellent public transportation system and rush hours without cars.
>
> Most important of all, was the sense of community that was present that day. We fortified our confidence in our capacity of making great collective efforts to build a more sustainable and happier city. Surveys revealed that 87% of the citizens were in agreement with the Car Free Day; 89% did not have any difficulty with the transportation system used; 92% said there was no absenteeism at their office, school or university; and 88% said they would like to have another Car Free Day.
>
> Now we want to bring a referendum to our voters, proposing a goal for the year 2015: Between 6:00 a.m. and 9:00 a.m. and between 4:30 p.m. and 7:30 p.m., all cars must be off the streets. Therefore the city should move exclusively in public transport and bicycles.

Campus Transport Management

Stanford University (www.stanford.edu)

Stanford University in Palo Alto, California plans to expand capacity by 25%, adding more than 2.3 million square feet of research and teaching buildings, public facilities and housing without increasing peak period vehicle traffic. By 2000, 1.7 million square feet of new buildings had been developed while automobile commute trips were reduced by 500 per day. To accomplish this the campus transportation management plan includes:

- A 1.5 mile transit mall.
- Free transit system with timed transfers to regional rail.
- Bicycle network.
- Staff parking "cash-out".
- Ridesharing program.
- Other transportation demand management elements.

By using this approach the campus was able to add $500 million in new projects with minimal planning or environmental review required for individual projects. The campus also avoided significant parking and roadway costs. Planners calculate that the University saves nearly $2,000 annually for every commuter shifted out of a car and into another mode. This also reduced regional agency traffic planning costs.

Public benefits included decreased congestion and improved safety on surrounding roadways and the regional traffic system, reduced air, noise and water pollution, and improved local transit options. All of Stanford's transportation services are available to students, employees and the general public.

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Hacienda is a mixed-use planned unit development (PUD) of distinction and quality. At 875 acres, Hacienda is the largest such development in Northern California and has been selected as one of the world's top 10 mixed-use business parks by Site Selection magazine.

Located near the junction of two Interstate freeways (I-580 and I-680), Hacienda is about halfway between San Francisco to the northwest and Silicon Valley to the southwest. Hacienda's central location makes for easy access to all the Bay Area's commercial centers and the region's largest labor pool.

As currently zoned, the park will contain approximately 11 million square feet of office, R&D, commercial and residential space. Construction of the park's infrastructure began in 1982, and the first office building was completed in August 1983.

All infrastructure improvements for Hacienda are complete, and over seven million square feet of space has been developed to date. Land uses allowed by the PUD include 4 & 5-story mid-rise office; 2 & 3-story garden office; 1 & 2-story "office/flex", 16 units/acre residential development and retail/commercial development.

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General Information

Description **. Developers . Management . Region**

Hacienda is a high-quality, mixed-use, master planned development situated near the intersection of two Interstate freeways in Pleasanton, California. Hacienda is conveniently located between San Francisco and Silicon Valley. With its instant access to two neighboring Interstate freeways and its advantageous "reverse-commute," companies at Hacienda can easily serve all their Bay Area clients, as well as draw from the Bay Area's largest labor pool and most affordable and rapidly growing housing market.

At 875 gross acres (730 net acres), Hacienda is the largest development of its kind in Northern California. 10,085,279 square feet of existing, mixed-use space is occupied by some 413 companies that locally employ approximately 22,474 people. Under the current PUD, at Hacienda's build-out, the park is expected to contain roughly 11.2 million square feet of mixed-use space and be the work location for 28,000 people.

Because of the innovative approach to planning, traffic mitigation, services and aesthetics taken by The Prudential Realty Group, Hacienda's principal developer, Hacienda retains overwhelming support from local voting residents and elected officials. Hacienda's unique programs and success have been featured in The Wall Street Journal, The San Francisco Chronicle/Examiner, The San Jose Mercury-News, as well as many other local, regional and national publications. Virtually all of the Bay Area's television stations have featured Hacienda. So well regarded are Hacienda's accomplishments, that in December 1988, Site Selection Magazine named Hacienda one of "the ten best business parks in the world."

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2003 BEST WORKPLACES for COMMUTERS℠ Hacienda Business Park

Hacienda knows our employees and residents need solutions for their commute. In response, Hacienda has created a nationally recognized comprehensive program to address commuting needs. This program meets all the required conditions to attain the national standard of excellence in commuting programs.

Hacienda is presently home to approximately 20,000 employees and residents, many of whom commute into the park from surrounding cities. Because of the high volume of commuters, a variety of transportation links with outlying areas have been developed to connect park users with destinations at or near their place of business. The following is an overview of the park's current program contained within a review of the various transportation alternatives available to Hacienda users.

In 1984, the developers of Hacienda entered into cooperative discussions with the City of Pleasanton to develop a plan that would control traffic congestion in the newly developed 854 acre park. These discussions resulted in an ordinance aimed at reducing traffic congestion. Under this ordinance, Hacienda was required to oversee park tenant participation to make sure that they were in compliance with the new traffic reduction requirements. The development also coordinated park-wide programs that would aid companies in meeting ordinance goals. Compliance assistance strategies consisted of a free commuter shuttle, carpool and vanpool coordination, development of on-site amenities to assist in the promotion of transportation alternatives and various information campaigns.

In 1994, amendments were made to the city ordinance to allow the City of Pleasanton the ability to receive delegation of the Bay Area Air Quality Management District's Regulation 13-1 and to meet requirements imposed by the Alameda County Congestion Management Agency. The amended ordinance required businesses with 50 or more employees, who begin work between the hours of 6:00 - 10:00 a.m., to meet both congestion management and vehicle reduction goals. Specifically, businesses were asked to achieve an average vehicle ridership of 1.35 persons per car by 1998 and reduce peak hour traffic by 45%.

As noted, Hacienda developed TSM measures that would aid park businesses in meeting city's congestions management objectives. Hacienda's Covenants, Conditions and Restrictions authorize the park to administer, coordinate and enforce transportation requirements. To do this, a comprehensive transportation program was initiated on Hacienda. Since 1985, the Association has continuously provided services to park users to help them realize their individual goals and thus help the city to achieve its goals. The services provided have changed with time to both meet the changing needs of the park population and to insure the highest cost benefit.

In 1995, with passage of the Lewis Bill, mandatory Transportation Management requirements could no longer be

required of employers by government agencies. Because of Hacienda's longstanding commitment to the goals of transportation management, incentive programs to encourage the use of transportation alternatives have continued voluntarily employing the same successful and award-winning approach utilized under the mandatory program.

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Airports . *Rail* . Bus . Rideshare . Cycling . Walking . Taxi/Shuttle Commuter Choice . Regional Programs

Altamont Commuter Express (ACE) www.acerail.com A daily commuter train which runs from Stockton to San Jose via Pleasanton.

- *Ride Guide* www.acerail.com/riding.html
- *Schedules* www.acerail.com/schedule.html

BART San Francisco Bay Area Rapid Transit District

BART www.bart.gov Access to BART news and information, schedules and events as well as features such as online ticket sales.

- *All About Access* www.bart.gov/guide/disabledAccess/overview.asp
- *BART & Buses* www.bart.gov/guide/transit/transit.asp
- *Bikes on BART* www.bart.gov/guide/bikes/bikeoverview.asp
- *Charge-A-Ticket* www.bart.gov/tickets/sales/machines.asp
- *Fare Calculator* www.bart.gov/tickets/calculator/farecalculator.asp
- *Safety on BART* www.bart.gov/guide/overview/yoursafety.asp
- *Schedules* www.bart.gov/stations/schedules/lineschedules.asp
- *Tickets by Mail* www.bart.gov/tickets/sales/mailordering.asp
- *Tickets-To-Go Information* www.bart.gov/tickets/sales/retailsales.asp
- *Tickets-To-Go Ordering* www.cdsnet-inc.net/tickets2go/bart.htm
- *Your Regional BART Puls Ticket* www.bart.gov/tickets/types/typesplus.asp

Caltrain

CalTrain www.caltrain.com/caltrain Providing commuter rail service from Gilroy to San Francisco.

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Washington State
Department of Transportation

Measures, Markers and Mileposts

The Gray Notebook for the quarter ending
March 31, 2003

WSDOT's quarterly report to the
Washington State Transportation Commission
on transportation programs and department management

Douglas B. MacDonald
Secretary of Transportation

Measures, Markers and Mileposts
The Gray Notebook for the quarter ending March 31, 2003

9th Edition
Published May 21, 2003

"What gets measured, gets managed."

This periodic report is prepared by WSDOT staff to track a variety of performance and accountability measures for routine review by the Transportation Commission and others. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for internal management use and is subject to correction and clarification.

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The *Gray Notebook* is published quarterly in February, May, August, and November. For an online version of this or a previous edition of the *Gray Notebook*, visit *www.wsdot.wa.gov/accountability*

Measures, Markers and Mileposts
The Gray Notebook for the quarter ending March 31, 2003

9th Edition
Published May 21, 2003

Contents

A Note from Doug MacDonald

The ninth quarterly Gray Notebook *includes a couple of noteworthy new features.*

First, three sections (pages 32 to 36) provide annual reporting on transportation system benchmarks specifically requested and directed by the legislature in January 2002. These requirements are now set forth in RCW 47.01.012. We are pleased that these topics are now added to the variety of performance measures and reports that have already found their way into the Gray Notebook *on WSDOT's own initiative.*

Second, the section on Measuring Congestion (pages 10 to 13) shows the efforts WSDOT is now making to quantify and describe the important issues of highway performance in the areas of travel times, congestion and delay. Explanatory notes accompanying those sections describe our aims, what we have achieved to date, and what we must continue to do. It is probably true that, to a greater extent than any other Gray Notebook *section, this material is on the cutting edge of transportation system performance measurement. There is much, however, to be done, as you will see.*

We hope you find the Gray Notebook *interesting and useful. For other aspects of WSDOT's accountability efforts, see* www.wsdot.wa.gov/accountability*. And much more will be forthcoming, as we work to meet the accountability and reporting expectations that the legislature has incorporated in the recent 2003 Transportation Funding Package.*

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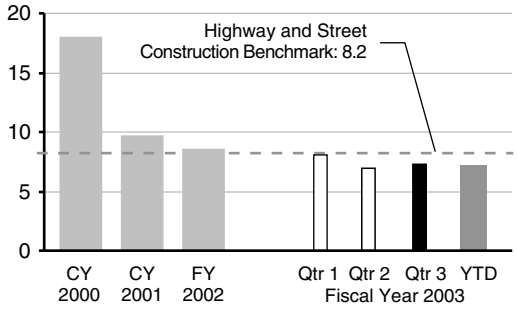
Contents (continued)

Worker Safety: Quarterly Update

Continuing updates on *Gray Notebook* safety topics – data is shown for calendar years (CY) 2000 and 2001, fiscal year (FY) 2002, and FY 2003 by quarter and by Year-to-Date (YTD).

WSDOT Highway Maintenance Workers

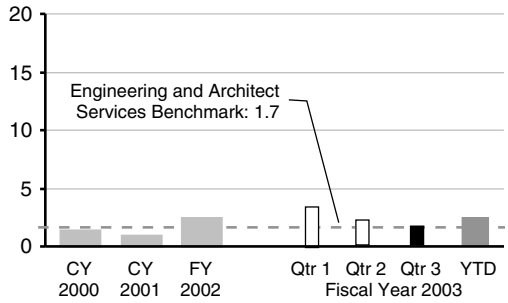
Recordable Injuries per 100 Workers per Fiscal Year



The third quarter recordable injury rate for maintenance was 7.23 injuries per 100 maintenance workers. There were 26 recordable injuries during the third quarter of which 13 were lost workday cases. These lost workday cases accounted for 169 lost workdays during the quarter. This averages 56 lost workdays per lost workday case and a lost workday incident rate of 47 days per 100 maintenance workers per fiscal year. Through three quarters of FY 03, there have been 27 (30%) back injuries. Back injuries continue to be the most frequently injured part of body. Strains accounted for 45% of the total injuries.

WSDOT Highway Engineer Workers

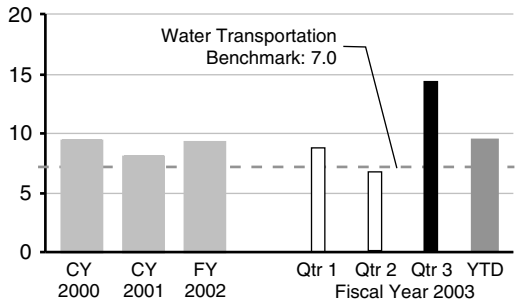
Recordable Injuries per 100 Workers per Fiscal Year



The third quarter recordable injury rate for engineer workers was 1.43 recordable injuries per 100 engineer workers, of which only three injuries resulted in lost workdays. These three lost workday injuries resulted in a total of 25 lost workdays. The average is 8.3 lost workdays per lost workday case and a lost workday incident rate of 5.1 lost workdays per 100 engineering workers per fiscal year. In FY 03, there were nine (23%) back injuries. The second most frequent claim filed was hearing loss. Sprains/strains (33%) were the most frequent nature of injury followed by occupational illness, e.g., Carpel Tunnel Syndrome.

WSDOT Ferry Vessel Workers

Recordable Injuries per 100 Workers per Fiscal Year



The third quarter recordable injury rate for WSF vessel workers was 14.2 recordable injuries per 100 vessel workers. Several injuries reported during the third quarter occurred in previous quarters, increasing the rate for this update. Twenty-nine of the 34 recordable injuries reported during the quarter were lost workday cases. These lost workday cases resulted in 215 lost workdays for an average of 7.4 lost workdays per lost workday case. This is a lost workday incident rate of 89.6 lost workdays per 100 vessel workers per fiscal year. A total of 74 recordable injuries for 1,290 lost workdays have accumulated through three quarters of FY 03. Strains/sprains were the most frequent nature of injury (74%) of all vessel worker injuries through three quarters of FY 03. Back injuries were the most frequent part of body injured (28%).

Source for all charts: WSDOT Safety Office

Accident Prevention Activities

Third Quarter FY 2003

- WSF began safety awareness seminars with all deck crews.
- The Southwest Region's "Special Safety Buddy" system has significantly reduced the region's injuries.
- The WSF conducted ergonomic reviews to identify workstation configuration and tasks, which could result in an injury or occupational illness. Safety inspections were also conducted at random.
- Awarded contract on high visibility clothing to enhance highway and WSF worker visibility.
- WSDOT has begun an agency-wide campaign to educate workers on West Nile Virus (WNV) and how to protect themselves from the virus. Maintenance personnel in all regions are implementing WNV surveillance and control activities in support of the state Department of Health.

Reading the Charts

"Recordable injuries and illnesses" is a standard measure that includes all work related deaths and work related illnesses and injuries, which result in loss of consciousness, restriction of work or motion, transfer to another job, or require medical treatment beyond first aid.

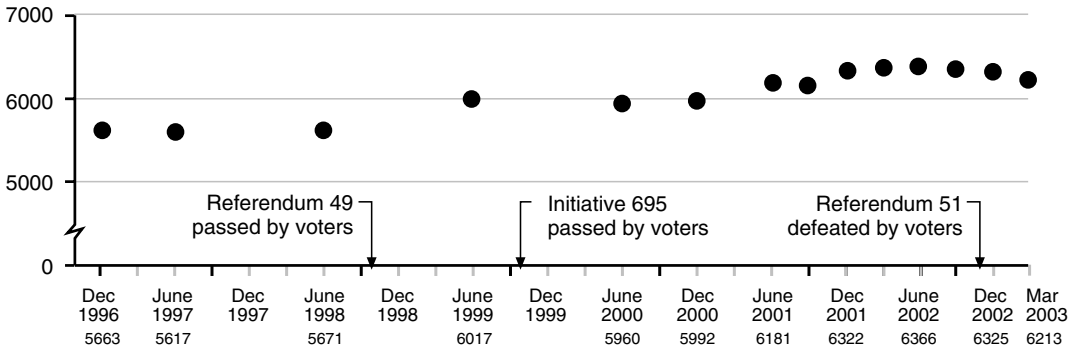
The U.S. Bureau of Labor Statistics provides the selected 2000 national average benchmarks. After discussion with the National Bureau of Labor Statistics, the following benchmarks were selected to provide a more relevant and consistent benchmark.

Maintenance: "Highway and Street Construction" Standard Industry Classification (SIC) 161 (rate 8.2)
Engineering: "Engineering and Architect Services" SIC 871 (rate 1.7)
Ferry vessel workers: "Water Transportation" SIC 44 (rate 7.0)
One worker equals 2,000 hours per year.

WSDOT Workforce Levels

One indicator of the agency's workforce size is the current number of permanent full-time employees on staff. The accompanying chart shows that number at various points since the end of 1996. (The number of "FTEs" [full-time equivalents] will generally exceed the number of full-time employees, since seasonal and part-time work force must also be funded from "FTE" allotments.)

Number of Permanent Full-Time Employees at WSDOT



Source: WSDOT Office of Human Resources.

WSDOT Employee Training Requirements

Maintenance and Safety Training Required by Law

Progress toward achieving training goals for maintenance employees is reported below. The number of required courses and the number of individuals required to complete a given course change periodically. This table shows the status of training completed for eleven of the 24 courses required this quarter.

	Maintenance Workers Requiring Training Mar 03	Total Current Maintenance Workers Trained to Date Mar 03	Maintenance Workers Trained 2nd Quarter FY03	Maintenance Workers Trained 3rd Quarter FY03	Compliance to Date: Target = 90%	Change Since Last Quarter
Safety Courses						
Blood Borne Pathogens	1221	1011	67	43	83%	+4%
First Aid	1456	1397	23	14	96%	+3%
*Hearing Conservation	1340	1211	15	0	90%	-1%
Personal Protective Equipment	1312	561	81	85	43%	+8%
Fall Protection	745	367	60	13	49%	+3%
Flagging & Traffic Control	1121	1085	10	4	97%	+2%
Maintenance Courses						
Drug Free Workplace	353	282	11	45	80%	+13%
Forklift	1183	988	33	12	84%	+1%
*Hazardous Materials Awareness	1022	465	133	1	45%	-2%
Manlift Operations	574	313	99	11	55%	+4%
Excavation, Trenching & Shoring	393	144	8	24	37%	+4%

** The number of workers requiring all training courses increased this quarter, causing the percent completion in these two courses to fall.*

Training for All WSDOT Employees

The following table reflects continued progress on five important workforce courses that are now receiving special emphasis.

	Number Requiring Training**	Number of Employees Trained	Number Trained 2nd Quarter FY03	Number Trained 3rd Quarter FY03	Compliance to Date: Target = 90%	Change Since Last Quarter
Training Courses						
Disability Awareness	7063	2186	199	191	31%	+4%
Ethical Standards	7063	6898	40	58	98%	+2%
Sexual Harassment/Discrimination	7063	3456	397	560	49%	+9%
Valuing Diversity	7063	2731	389	384	39%	+7%
Violence that Affects the Workplace	7063	5410	577	20	77%	+2%

***Courses shown are mandatory for all permanent full-time, part-time, and temporary employees.*
Diversity training previously offered and completed by 63% of our workforce (1992 to 2002) has been revised and replaced with three separate courses, Valuing Diversity, Sexual Harassment, & Disability Awareness. The new courses are offered as refresher training and first time training. The goal is to have 90% of our workforce trained as resources and time allow. *Source: WSDOT Office of Human Resources.*

Highway Construction Program: Quarterly Update

Meeting WSDOT's Scheduled Advertisement Dates

For the biennium to date, WSDOT has advertised 376 improvement and preservation projects. This represents a 92% delivery rate based on the revised plan of 407 projects. WSDOT's project delivery schedule, according to the Capital Improvement and Preservation Program (CIPP) is shown on the adjacent chart for the quarter ending March 31, 2003. The chart also shows the revision to the planned line, with 429 projects originally scheduled to be advertised to date. This is the result of the $76 million Current Law Budget reduction to the CIPP, from the 2002 Supplemental Budget*.

In quarter seven, 30 projects were not advertised as planned. This can be attributed to the following factors:

- Projects deferrals caused by including insufficient time for design work and delayed scoping and preliminary engineering of projects. This accounted for 11 of the deferrals and one deletion this quarter. Two examples:

  Prosser's I-82 pavement project in a slide area. Additional subsurface testing indicated a more complicated and costly solution would be required to repair the slide area. The project was deleted until an appropriate solution is developed and additional funding is approved

  SR 20, Sidney St. Vicinity to Scenic Heights, south of Oak Harbor. This project would provide better sight distance by modifying the highway alignment and removing trees and utility poles. Further analysis determined the addition of left turn lanes at two locations was needed, which increased right of way acquisition time. Also, additional environmental effort is needed as a result of including Federal funds in this project. The Ad date was delayed two years.

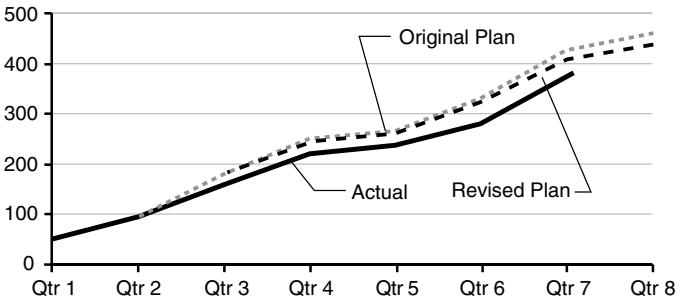
- Projects deferrals as a result of coordination with partner agencies. This accounted for nine of the deferrals this quarter. Two examples:

  Bothell's SR 527 pavement project consists of 2.5 miles of asphalt paving. The City of Bothell requested changes to the project resulting in a two-month delay.

  Waitsburg's SR 12 pavement project, including safety improvements. Delayed three months to address citizen's opposition to project.

Highway Construction Program Delivery

Planned vs. Actual Number of Projects Advertised
2001-2003 Biennium, Quarter 7 Ending March 31, 2003



- Project deferrals as a result of changing project priorities, to eliminate possible conflicts with adjoining projects and adjusting work to available funding. These accounted for nine of the deferrals this quarter. Two examples:

  SR 16, Tacoma Narrows Bridge Electrical. This project makes major electrical repairs to the existing bridge. Because of likely conflict with new second Narrows Bridge this project is deferred to 2005-07 biennium.

  SR 112, Jim Creek Culvert Repair, 30 miles west of Port Angeles. This project repairs a failing culvert, while removing a fish barrier. The Makah Tribe got BIA funds to advertise a paving project in this locale, conflicting with this project. Deferred to the 2003-05 biennium.

These projects will continue to receive focused management attention to ensure project delivery during the remainder of the biennium.

***Adjustments to Original Plan**

Projects deferred or deleted as a result of the Current Law Budget reduction account for nine deferred and one deleted project this quarter. Two examples:

SR 7 Elbe Safety Interchange Facility. *40 miles south of Tacoma. The project constructs a rest area facility. Although the project has Federal earmark available, there is no future I3 subprogram allocation. No new Ad date is proposed.*

SR 3/305 Interchange Vicinity, near Poulsbo. *The project installs signals and adjusts alignment to the interchange. This WSDOT contribution to a developer project was deleted with the program reduction. The developer has since funded the entire project and it is currently under construction.*

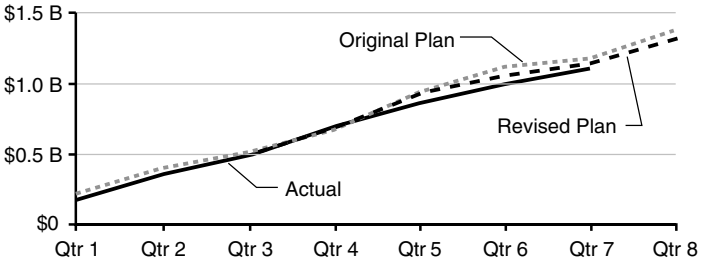
Highway Construction Program Cash Flow

Expenditures through the quarter ending March 31, 2002, are slightly above plan, achieving over 97% of budgeted cash flow. Historically, WSDOT's cash flow for this program is 92% to 95%. The chart reflects the revised plan due to the budget reduction explained above. The expenditure rate reflects the high delivery rate of projects to advertisement in the highway improvement program. This expenditure rate also reflects:

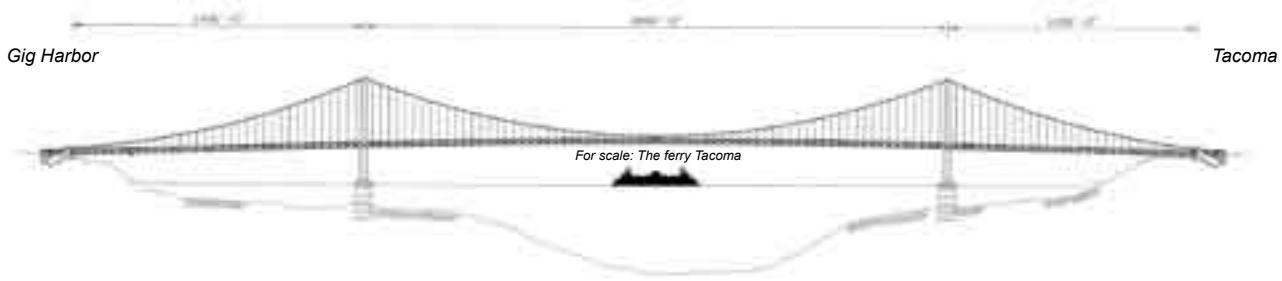
- A Highway Construction Program that included a large number of new construction starts in spring 2001. While these projects were actually started in the last quarter of the 1999-2001 biennium, this work has driven expenditure levels in the current biennium.
- The emphasis in getting projects to advertisement. This has been an important management focus and has been reported throughout the year in the *Gray Notebook*.
- Activity in the regions, often with direct encouragement and support of customer communities, in moving projects "to ad" given the prospects for project deferrals or cancellation in a period of expected budgetary stringency.
- Favorable construction weather, encouraging contractors to speed their work.

Highway Construction Program Cash Flow

Planned vs. Actual Expenditures
2001-2003 Biennium, Quarter 7 Ending March 31, 2003
Dollars in Billions



Sources for all charts: WSDOT Program Management Office.



Tacoma Narrows Bridge Project Update

As of March 31, 2003, design/builders Tacoma Narrows Constructors (TNC) have completed 5.2% of the physical construction activity for the new State Route 16 Tacoma Narrows Bridge. Todd Pacific Shipyards Corporation, TNC's subcontractor recently launched two completed giant steel "cutting edges" that will form the bottom of two caissons (bridge foundations) on which the bridge towers will be built. Each cutting edge measures 131 feet long, 81 feet wide and 18 feet high, and weighs about 750 tons. After launch in Seattle, each cutting edge was towed to the Port of Tacoma for caisson wall construction — building up the sides of the cutting edges with reinforced concrete. When the caissons reach 40 feet in height, they will be towed to the new bridge site in June and late July. Once at the site, the construction will continue on the caissons until they are properly embedded into the Narrows seabed. Crews will then begin constructing the bridge towers. In the meantime, dredging, trenching and riprap placement are being done in the Narrows seabed to prepare the caisson landing area.

This complete caisson "cutting edge" slid gracefully into Elliott Bay during a recent launch. It was later towed to the Port of Tacoma for caisson construction. Later this summer it will be moved to the bridge site for further construction.

Other work on the overall project is also continuing. Construction is underway at 24th Street NW in Gig Harbor (seen at right) where crews are building a new overpass and half-diamond interchange. Work is also occurring in the 36th Street NW and 22nd Avenue NW vicinities as crews relocate utilities and do other preparation work to realign local roads, widen and improve intersections, create bicycle facilities, and widen State Route 16 to accommodate future HOV lanes. Concurrent design work also continues. For more information, visit *www.wsdot.wa.gov/projects/sr16narrowsbridge/*.

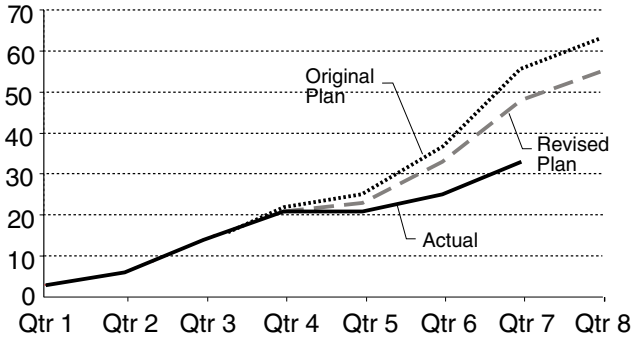
24th Street Bridge north pier is shown in this recent photo. Bridge girders will be placed on top of the wall.

Highway Safety: Quarterly Update

The highway safety projects tracked on this page are a portion of the construction projects that were described on page three. Of the 56 safety improvement projects originally planned to be advertised by the 7th quarter of the 01-03 biennium, eight projects have been removed due to the Supplemental Budget reductions, for a revised plan of 48 project advertisements. Through the 7th quarter, 33 projects have been advertised. In the 7th quarter, 15 projects were scheduled for Ad under the revised plan. A total of eight projects went to Ad during that period: five originally scheduled projects, one previously delayed project, one project advanced from the 03-05 biennium, and one addition to the program to construct safety improvements with a new federal grant.

Safety Improvement Program Delivery

Planned vs. Actual Number of Projects Advertised
2001-2003 Biennium, Quarter 7 Ending March 31,2003



From the revised plan of scheduled projects for advertisement in the 7th quarter, 10 were deferred:

- Seven projects were deferred due to design, scoping, right-of-way or environmental issues.

  SR 20, Sidney St. Vicinity to Scenic Heights, south of Oak Harbor. This project would provide better sight distance by modifying the highway alignment and removing trees and utility poles. Further analysis determined the addition of left turn lanes at two locations was needed, which increased right of way acquisition time. Also, additional environmental effort is needed as a result of including Federal funds in this project. The Ad date was delayed two years.

  SR 539, King Tut Road and Bartlett Road, south of Lynden. This project would construct a northbound left turn lane at the King Tut Road intersection. At the Bartlett Road intersection, the project would construct a northbound left turn lane, a northbound right turn pocket, and a southbound left turn lane. Project is delayed to minimize construction impacts to the Guide Meridian Water Association. Right of way acquisition is in process with a project Ad date of February 2004.

  SR 532, at 102nd Ave. NW, in Stanwood. This project would install traffic signals and improve existing sidewalks. During the design phase of the project, it was discovered that county right-of-way plans were not consistent with field conditions and local property owners had encroached on state right of way. Project is delayed one year to update existing right-of-way plan.

  SR 202, near Riverside Park, in Fall City. This project would construct two roundabouts. The portion of the project enhancing pedestrian safety by replacing and installing sidewalks is to be completed as part of another project. The main project will be delayed until 2005-2007 biennium pending acquisition of additional right-of-way when funding is available.

  SR 20, Oak Harbor NCL to Frostad Road, north of Oak Harbor. This project would add a two-way left turn lane from the vicinity of NE Narrows Avenue to Oak Harbor north city limits, add left turn lanes and illumination at Cemetery Road/NE 16th Avenue, Sleeper Road, and Frostad Road, and add passing lanes in the westbound direction. To reduce cost for wetland mitigation, the needs of four projects were designed into one site. The additional time needed to compile environmental documentation and obtain permits for the four projects delayed the Ad date nine months.

  SR 20, near Frostad Road, north of Oak Harbor. This project would add guardrail where needed throughout the project area. Project delayed nine months over issues concerning the wetland mitigation site.

  SR 542, Scenic Viewpoint to Excelsior Trail, on the Mount Baker Highway. This project would install guardrail as needed throughout the project area. Project delayed five months to complete environmental documentation for a biological assessment not previously scoped.

- Three projects were deferred for additional partnership coordination needs.

  I-5, Northbound Ramps at SR 532, east of Stanwood. The original project would have provided a one-lane roundabout at the intersection of the northbound I-5 ramps and SR 532. To accommodate design suggestions from the public and elected officials, the project was delayed. The northbound ramps roundabout is now included in a new revenue project that will also make improvements at the intersection of old SR 99 and SR 532. The expanded project Ad date is Spring 2006

  SR 531, in front of Lakewood High School, west of Arlington. This project would provide a sidewalk in front of Lakewood High School. The delay allowed the school district to deed right of way to the state and locate sidewalks away from the highway. Ad date will be in 2003.

  SR 522, 83rd Place NE, west of Bothell. This project would signalize the intersection at 83rd Place NE and provide an eastbound left turn lane at this intersection. Project delayed to 2005-2007 biennium to enable it to be packaged with other lane-widening projects in the corridor to minimize rework and traffic disruption.

Intersection Improvements Save Lives

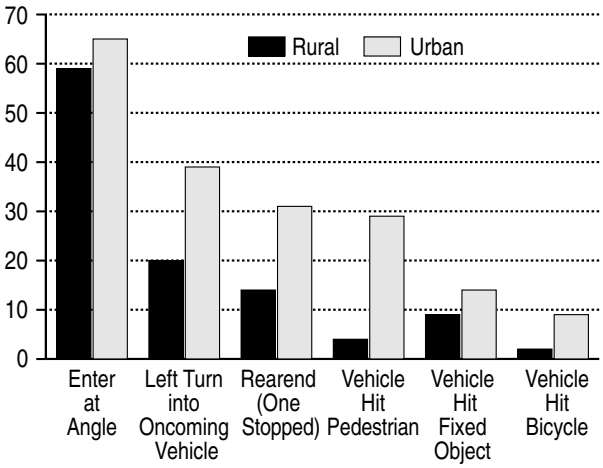
Collisions in intersections are a leading cause of urban and rural traffic fatalities and disabling injuries. The six most frequent types of fatal and disabling collisions related to state highway intersections are shown in the chart.

More than 1,582 rural and urban collisions occurred at state highway intersections in 2001. More than a third of these rural and urban crashes included drivers entering the intersection and colliding at an angle. Other collision types at intersections include sideswipe collisions, head-on collisions, rear-end collisions, and hitting fixed objects.

Physical or operational changes or improvements to a roadway or intersection can make a big difference in safety and also be low cost.

An example of an operational safety intersection improvement using low cost enhancements in the Olympic Region is a re-striping project at the intersection of U.S. 101 and SR 112 completed in 2002.

Most Frequent Types of Fatal and Disabling Collisions at Intersections on State Highways
Number of Collisions 1999-2001, Average per Year



Re-striping intersections are effective operational improvements that are low cost interim safety solutions. Numerous low cost safety enhancement projects are taking place across the state.

Before re-striping

After re-striping

A low cost enhancement at the intersection of U.S. 101 and SR 112.

Reducing Bicyclist Fatalities

Washington ranked 16th lowest in bicyclist fatality rates in 2001, compared to other states. Eight bicyclists were killed on Washington state highways in 2001. In addition, there were more than 200 reported accidents involving bicyclists, including disabling injury accidents. This may be the tip of the iceberg: a recent FHWA study of hospital emergency department data indicates that between 40 and 60 percent of all bicycle accidents are not captured in highway reporting data.

Consistent with accident trends for pedestrians (see the *Gray Notebook* for the quarter ending December 31, 2002), State Route 99 appears to be the corridor with the largest concentration of bicycle-related accidents from 1995 to 2001. Some of the risk factors at work on SR 99 include vehicle traffic volumes, vehicle speeds, shoulder configurations and illumination conditions.

Traffic Safety Near Schools

In 1999, WSDOT began administering a grant program called Traffic Safety Near Schools. This program has now funded more than 70 projects statewide designed to improve bicyclist and pedestrian safety near schools. However, the program has not been able to fund nearly 90 additional project proposals. The legislature's new transportation budget provides an additional $1.5 million to fund 10 to 12 more projects, leaving about 80 unfunded.

Some of these grants have already had significant impacts on safety. For example, the 155th Street crossing in Kenmore was defined as a high accident area. Since receiving the Traffic Safety Near Schools grant in 2000 to improve sidewalk and pedestrian safety, Kenmore has not had an accident at this location.

Federal Benchmarking Progress

The Federal Highway Administration (FHWA) recently completed a benchmarking study of all states and their bicycle and pedestrian programs. Washington met all pedestrian benchmarking standards and all but one bicycle benchmark, ranking Washington second nationally.

Scoring on Eight Performance Benchmarks

- ☑ Bike/Ped Plan exists
- ☐ Bicycle Plan meets FHWA guidance
- ☑ Accomodates bicycles in highway projects
- ☑ Includes sidewalk in new urban highway projects
- ☑ Includes sidewalks in re-construction projects
- ☑ Sidewalks are generally included in urban projects
- ☑ Statewide Safe Routes Program
- ☑ Other Statewide programs

2001 Bicyclist Fatality Rates by State

Fatalities per 100,000 Population
Source: National Highway Traffic Safety Administration

Ranked lowest fatality rate to highest

Rank	*State*	*Bicyclists Killed*	*Fatality Rate*
1	North Dakota	0	0.00
2	Vermont	0	0.00
3	Arkansas	1	0.04
4	Oklahoma	2	0.06
5	Connecticut	2	0.06
6	Kansas	2	0.07
7	New Hampshire	1	0.08
8	Tennessee	5	0.09
9	Rhode Island	1	0.09
10	Iowa	3	0.10
11	Missouri	6	0.11
12	Montana	1	0.11
13	Pennsylvania	14	0.11
14	Utah	3	0.13
15	South Dakota	1	0.13
16	**Washington**	**8**	**0.13**
17	Alabama	6	0.13
18	Minnesota	7	0.14
19	Ohio	16	0.14
20	Massachusetts	9	0.14
21	Idaho	2	0.15
22	Alaska	1	0.16
23	Wisconsin	9	0.17
24	West Virginia	3	0.17
25	Virginia	13	0.18
26	Nevada	4	0.19
27	Indiana	12	0.20
28	Kentucky	8	0.20
29	Wyoming	1	0.20
30	Maryland	11	0.20
31	New York	41	0.21
32	Texas	46	0.22
33	Illinois	27	0.22
34	Georgia	20	0.24
35	Michigan	24	0.24
36	Colorado	11	0.25
37	Delaware	2	0.25
	U.S. Average		**0.26**
38	Mississippi	8	0.28
39	Nebraska	5	0.29
40	North Carolina	24	0.29
41	California	105	0.30
42	New Jersey	26	0.31
43	Maine	4	0.31
44	New Mexico	7	0.38
45	Oregon	15	0.43
46	Louisiana	23	0.51
47	Arizona	28	0.53
48	Hawaii	7	0.57
49	South Carolina	24	0.59
50	Florida	127	0.78

Highway Maintenance: Quarterly Update
Safety Rest Areas

Roadside Havens for Weary Travelers

When you need to take a break after slurping down your 32 ounce soft drink and driving another 100 miles on the highway ... when your kids are asking "are we there yet?" when you still have miles to go ... These might be good times to pull into one of Washington's 43 Safety Rest Areas.

Nearly 39 million visitors (more than six visits for every state resident, on average) each year take advantage of these rest areas to use the restroom, take a nap, walk their canine companions, stretch their legs, or unpack their own picnic lunch.

For example, on a typical summer day, the Indian John Hill Safety Rest Area, west of Ellensburg, serves approximately 10,000 visitors, equivalent to twice the student population of Central Washington University in Ellensburg.

How Are We Doing/Public Feedback

Periodically we ask the public "how are we doing?" In 1997, 6,700 questionnaire forms were returned from our rest areas survey. Ninety-one percent of the respondents rated WSDOT's facilities "good" or "excellent." WSDOT learned that travelers spend on average thirty minutes or less at our facilities, with the heaviest use between 9 am and noon and 2 pm and 6 pm. Restroom cleanliness is most important to customers. Most rest area users are traveling for vacation or pleasure, and more visitors stop at rest areas in the summer months.

A 2000 telephone survey of 600 citizens concluded that most rest area customers were "satisfied" to "extremely satisfied."

WSDOT will conduct another Safety Rest Area customer survey during the summer and fall of 2003. It will provide valuable customer feedback to ensure that we are focusing on and responding to our customers' needs.

Safety Rest Area Locations and Amenities

WSDOT owns and operates 43 safety rest area facilities. Most facilities provide restrooms, picnic tables, drinking water, telephones, pet areas, motorist information and snack machines. Free coffee is available at some rest areas. For more information on rest area locations and amenities go to www.wsdot.wa.gov/biz/restareas/restareamap.htm.

The Custer Rest Area on Interstate 5 near Bellingham and the Canadian border. Safety Rest Areas started out as highway beautification projects and over time the emphasis has switched to highway safety.

Safety Rest Area Maintenance

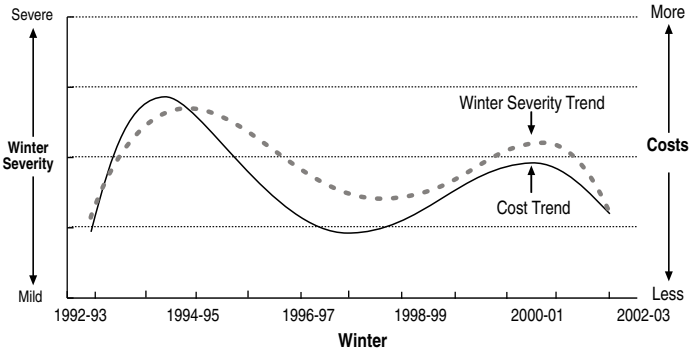
Once a rest area is located and built, WSDOT is responsible for facility and landscape maintenance, garbage disposal, cleaning, and provision of electric, water and sewage treatment utilities. Water and sewer service at remote rest areas can be difficult. In some cases, WSDOT maintains water wells, pumps, delivery systems and water quality monitoring to keep a rest area open to the public. Sewage disposal systems may involve pump stations, surface lagoons, infiltration designs, and/or several-mile-long pipelines connected to offsite treatment facilities.

Highway Maintenance: Quarterly Update
Snow Removal

A Mild Winter Resulted in Lower Snow and Ice Removal Costs

The statewide winter severity and snow and ice operations chart documents the correlation between winter weather conditions and winter maintenance expenditures over time. Maintenance crews, equipment and materials were ready to do winter storm battle, but overall, it was a mild winter without major incidents and costs were down.

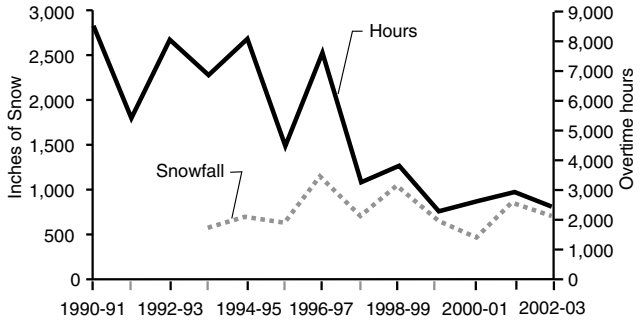
Statewide Winter Severity and Snow and Ice Operations Costs



Wenatchee Maintenance Area Measures Overtime Hours and Snowfall

The Wenatchee maintenance area is tracking the trend of significant reduction in winter overtime hour levels made possible by advances in technology, work shift efficiencies, and the effective application of anti-ice chemicals.

Snow and Ice Control
Overtime Hours per Snowfall Amount
North Central Region, Wenatchee Maintenance Area
Winter Seasons, 1990 to 2003

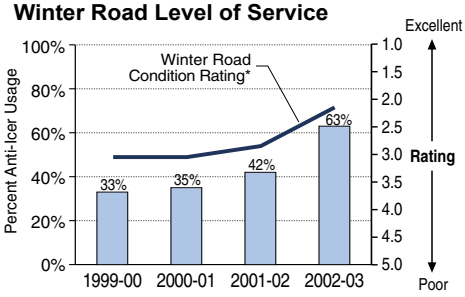


**Accumulated snowfall measured at six shed locations in the Wenatchee Maintenance Area.*

Winter Roadway Condition Level of Service and Anti-Icer Chemicals

WSDOT tracks winter roadway conditions from November 1 to March 31 every year. Maintenance areas assess road conditions during this period every week at 160 different locations throughout the state. Highways are rated for bare pavement and other factors that enhance safe winter driving conditions. This chart shows a correlation between increased anti-icer use and better roadway conditions.

Statewide Anti-icer Use and Winter Road Level of Service



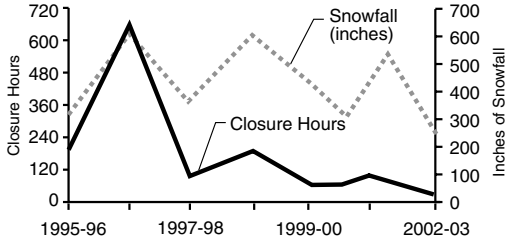
**Performance rating from WSDOT's Maintenance Accountability Process (MAP)*

Keeping Mountain Pass Highway Closures to a Minimum

Interstate 90 Snoqualmie Pass Winter Closure Hours and Snowfall

This chart shows that pass closure hours have decreased while snowfall levels have followed a steady trend. This winter Snoqualmie Pass received 255 inches of snowfall and was closed a total of 11 hours, 31 minutes (8 hours, 59 minutes eastbound; 2 hours, 32 minutes westbound). Snoqualmie Pass normally receives 442 inches of snow a year (based on the 53-year average) and is typically closed for winter snow and ice removal operations 66 hours eastbound and 55 hours westbound (based on the 10-year average).

Snoqualmie Pass Winter Closure Hours
Accumulated Annual Hours and Inches of Snowfall
Interstate 90 Winter Seasons, 1995 to 2003



Footnote: WSDOT is analyzing field data from this winter's salt pilot project and will report findings in a future Gray Notebook. *See September 30, 2002 for other* Gray Notebook *winter measures.*

Measuring Congestion: Annual Update

As many highway users have correctly suspected, the drop in regional employment is linked with a lessening of traffic congestion on many Central Puget Sound highways. The trend lines for employment and for average weekday traffic volumes are generally very similar. They each showed rapid growth during the 1990s that has tailed off in the last couple of years. The traffic volume pattern does vary somewhat from location to location. For example, a significant reduction since 2000 has occurred on the highways crossing Lake Washington, while the number of commuters on SR 167 in King County has actually increased during the same period. Other interesting stories in the data:

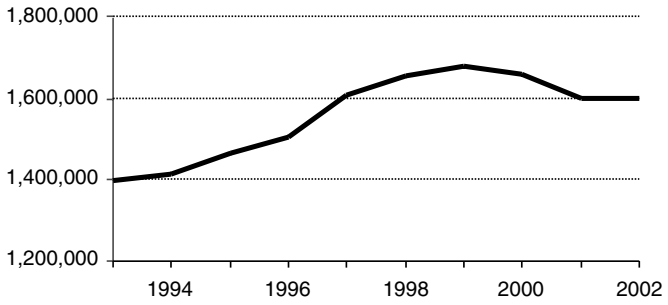
- The recent trends have affected all modes. HOV lane volumes are generally down. Transit ridership is down. Ferry ridership is down. (Details of this data have not been included in this Gray Notebook but are separately available from WSDOT.)
- The number of accidents have decreased significantly, accompanying the slackened traffic volumes. We don't know the extent to which congestion has been lessened because of fewer accidents, or how much the drop in accidents has resulted from reduced congestion. Each tendency clearly reinforces the other.
- Examples of recently completed highway projects are clearly shown to have benefited traffic conditions.

Peak period congestion is still prevalent in many corridors, especially in the peak direction. The freeway system in the Puget Sound region has little if any surplus capacity around the peak periods. An economic rebound will likely result in a resumption of the trends toward increased congestion experienced through much of the 1990s. This is why *now* is when improvements must be taken in hand to deal with future conditions.

Traffic and Employment

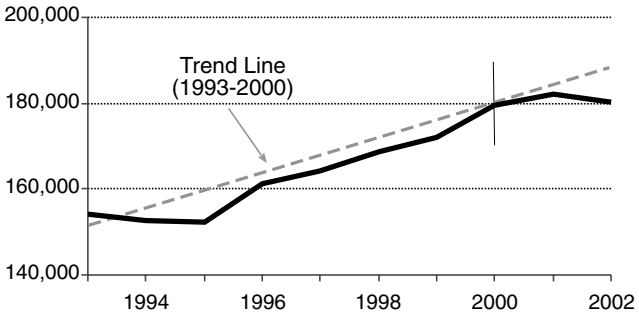
It should not come as a surprise that the levels of Puget Sound region traffic have been affected by the trends in regional employment. The graph to the right shows that employment in the Puget Sound region grew at a brisk pace during the latter part of the 1990s, peaking in 1999. Since then, employment has fallen by nearly 80,000. Fewer individuals are now traveling to work on the region's highways during peak periods.

Total Employment - Puget Sound Region



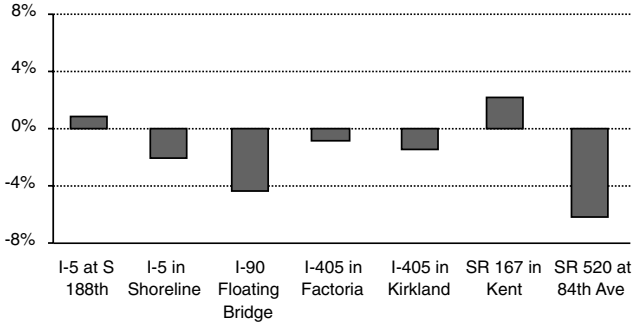
WSDOT analyzed several years of traffic volumes from the month of March for several locations in King, Pierce and Snohomish Counties. Traffic volumes on Puget Sound regional highways generally peaked in 2000 or 2001 following nearly a decade of rapid growth. Since then, the traffic volumes have remained relatively flat or have slightly decreased as shown on the typical graph depicting traffic volume on I-5 at Fife. This diminished growth of volume is found on a number of corridors; some corridors, in fact, have experienced actual decreases.

March Average Weekday Traffic Volumes
I-5 at HWY 99 in Fife



A snapshot of the weekday volumes for the month of March, comparing 2000 with 2003 for seven locations in King, Pierce and Snohomish Counties indicates a reduction in volumes on all but two of the seven locations (see the graph to the right).

March Average Weekday Volumes
Percent change: 2000 to 2003

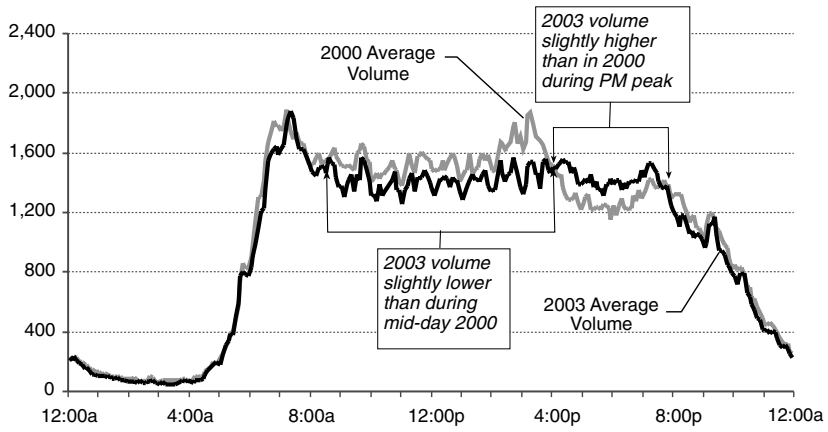


Traffic Volumes and Speed on SR 520: Comparing March 2003

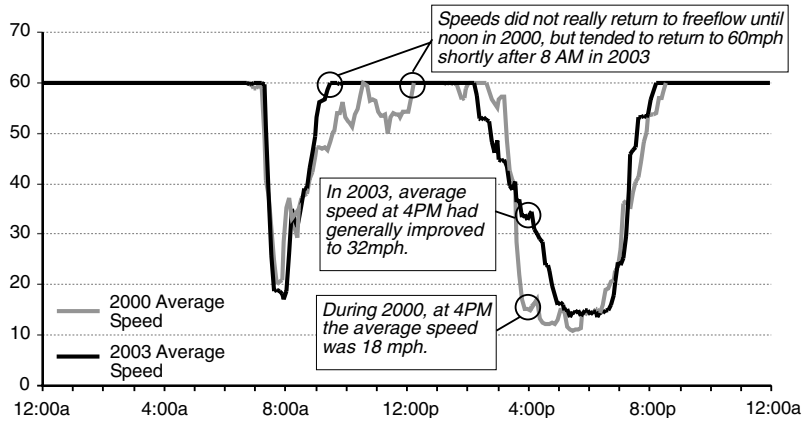
The two graphs to the right display data for SR 520 in the vicinity of the high rises, to use the traffic reporter's venacular. The top graph charts average traffic volumes across 24 hours for 2000 and 2003. The bottom graph, in turn, charts the speed of traffic. On westbound SR 520 travel speeds have increased throughout much of the day. This facility is still congested, but the duration of afternoon peak is shorter. Increased travel speeds allow more vehicle throughput, which results in higher traffic volumes as evident during the PM Peak in the volume graph to the above right.

Travel speeds have improved in many corridors, with mid-day slowdowns reduced or eliminated, and peak periods are shorter and less severe.

Average Weekday Travel Volumes
SR 520 Westbound Approaching the Floating Bridge



Average Weekday Travel Speeds
SR 520 Westbound Approaching the Floating Bridge



Traffic Accidents on I-405: Comparing 2002 to 2001

Between 2001 and 2002 WSDOT determined that there has been a reduction in traffic accidents on I-405. Higher traffic congestion generally leads to a greater frequency of accidents. The greater the number of accidents, the worse congestion becomes. Were accidents down because congestion was down? Or was congestion down because accidents were down? The adjacent table shows that the total number of accidents in both directions, except northbound during the AM peak period, on I-405 between Bellevue and Tukwila decreased significantly from 2001 to 2002.

Accident Comparison
I-405 (Tukwila to Bellevue)

Northbound	2001	2002	% Change
AM Peak Period (Tu,W,Th)	90	90	0%
PM Peak Period (Tu,W,Th)	73	49	-33%
All Day (Tu,W,Th)	278	203	-27%

Southbound	2001	2002	% Change
AM Peak Period (Tu,W,Th)	45	32	-29%
PM Peak Period (Tu,W,Th)	105	71	-32%
All Day (Tu,W,Th)	232	180	-22%

Distribution of Traffic Between Freeways and Arterials 1999-2003

Traffic trends between 1999 – 2003 at the following locations show that volumes on other highways and major arterials has generally held steady since 1999, similar to trends found throughout the Puget Sound region. This suggests that travel demand around the region has moderated rather than shifting from freeways to arterials or vice versa.

Location	1999	2000	2001	2002	2003
Rucker Ave, 42nd St in Everett	33,504	32,213	–	35,190	–
Hwy 99 at Raye St in Seattle	–	82,283	84,114	82,253	82,247
148th Ave in Bellevue	35,200	36,600	33,900	35,700	–

Highway Improvements Have Reduced Congestion

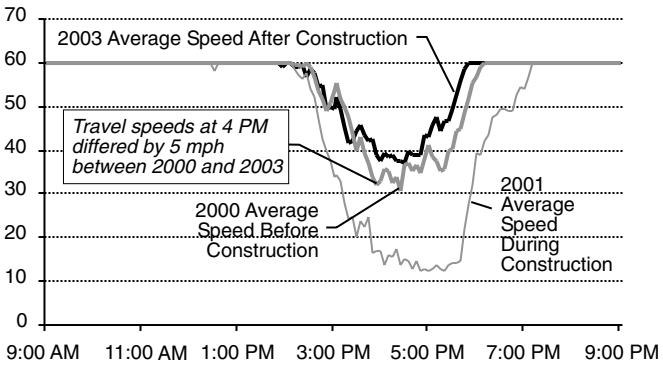
Two examples of how traffic conditions change as a result of highway improvement projects can be seen from the new HOV lane on southbound I-5 from the vicinity of Southcenter to Federal Way, completed in late 2002, and the new off ramp from southbound I-405 to southbound SR 167, completed in April 2003. Unfortunately, construction itself often slows traffic, as plainly demonstrated in this section of I-5 in 2001.

I-5 Southbound HOV Lane

The project added a HOV lane to I-5. The graph to the right shows that in the year 2000 before construction travel speeds at 4 pm averaged 33 mph. In the following year 2001 during construction travel speeds at 4 pm averaged 17 mph. The travel speeds at 4 pm after project completion have increased to approximately 38 mph.

Average Weekday Travel Speeds

I-5 SB near SeaTac

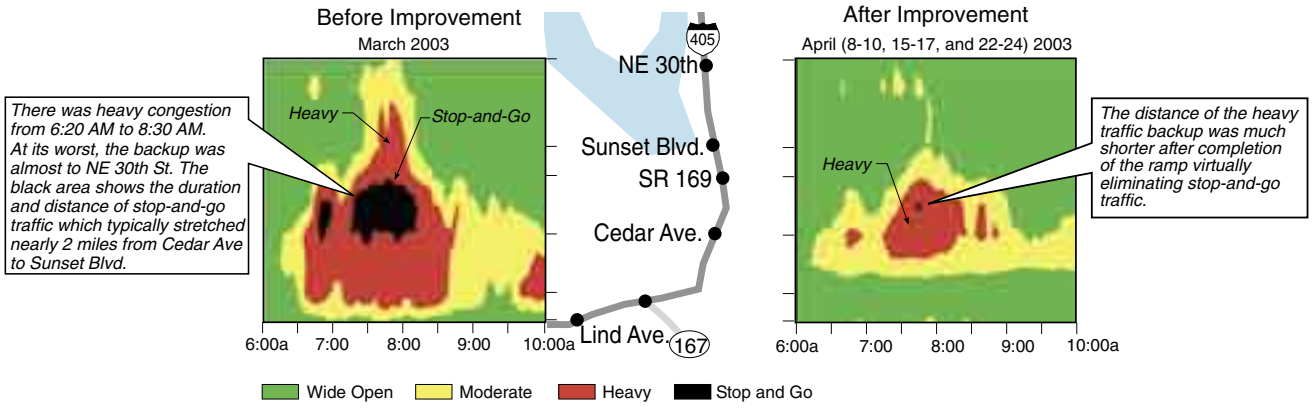


I-405 – SR 167 Ramp Separation

The new off ramp from southbound I-405 to southbound SR 167 opened to traffic Sunday, April 6. Three weeks after opening to traffic, the conditions on southbound I-405 had generally improved during the morning peak. Highway speeds on I-405 increased and back-ups decreased. Vehicle throughput on the ramp has increased by about 13% and on the mainline by about 8%.

Average Weekday Congestion

I-405 Southbound



Ramp: Average Weekday Hourly Volumes

Southbound I-405 to Southbound SR 167 Ramp

Daytime volume increased by about 13 %

Ramp throughput increased between 6-10 AM.

Time	Before Ramp Opening*	After Ramp Opening	Improved Throughput
6:00	1,239	1,271	32
7:00	1,187	1,425	237
8:00	1,138	1,279	141
9:00	1,136	1,243	107
10:00	1,129	1,279	150

Mainline: Average Weekday Hourly Volumes

Southbound I-405 at Benson Road

Daytime volume increased by about 8 %

Mainline throughput increased between 6-10 AM.

Time	Before Ramp Opening	After Ramp Opening	Improved Throughput
6:00	4,075	4,202	126
7:00	4,314	4,647	333
8:00	4,183	4,240	57
9:00	3,803	3,859	56
10:00	3,577	3,829	252

** September and October 2001 ramp data.*

Travel Time Measures: Annual Update

In May 2002, WSDOT launched its first dynamic, real travel time information website for eleven commute routes in the Puget Sound region (find at: *www.wsdot.wa.gov/pugetsoundtraffic/traveltimes/*). This popular service has since been widely used by commuters and TV and radio news programs. The averages of real travel time data has been compiled for 2002 and compared against travel time data archived from 2001.

Improved Travel Times

Small but significant decreases in average peak travel times in 2002 as compared to 2001 occurred on four of the most heavily traveled routes. These changes have been summarized in the table below. Another noticeable improvement on these four routes was in the measure of 95% Reliable Travel Time. This is probably the most important measure for everyday commuters. It uses data from days throughout the year to compute a good approximation of "worst case" travel. Ninety-five percent of the days, travel time equals or betters this marker. If commuters allow for their trip to equal the 95% reliable travel time, they can expect to travel the route on time, on 95 percent of their trips, or 19 working days out of 20.

On these particular routes, traffic volumes during commute hours remained almost unchanged in the two comparison years. Why then, did travel times improve? One possible explanation, although not easy to prove with the existing data resources, is the expansion of WSDOT's Incident Response Program on these routes (see the September 30, 2002 *Gray Notebook*). Among other things, the Incident Response Program has helped to speed the clearance of disabled vehicles – about half of all incidents affecting the roadways. These and other incidents are what cause "Non-Recurrent Congestion" (the back-ups resulting from factors other than the inherent roadway capacity limitations - which, by contrast, is regarded as "Recurrent Congestion"). WSDOT has postulated that roadways are very likely operating under the influence of incidents or other causes of Non-Recurrent Congestion (severe bad weather, for example) when travel times exceed twice the free flow travel time. On these routes, the 2001 to 2002 comparison shows significant decreases in the daily peak commute times when the roadway is experiencing two times free flow congestion status. Smarter, more attentive highway management – *like the Incident Response Program and the Joint Operations Policy Statement (national-model operating agreement between WSDOT and the Washington State Patrol) – are almost surely contributing benefits to travelers in reduced delay.*

2001 & 2002 Peak Travel Times – Highlighted Improvements

			Average Peak Travel Time			Number of Days When Peak Travel Times Exceeded 2 X Freeflow			*95% Reliable Travel Time		
Route	Route Description	Miles	2001	2002	Change	2001	2002	Change	2001	2002	Change
I-5	SeaTac to Seattle (AM)	13	24 min.	23 min.	-1 min.	84	44	-16%	31 min.	28 min.	-3 min.
I-405	Tukwila to Bellevue (AM	13.5	31 min.	30 min.	-1 min.	198	178	-10%	43 min.	41 min.	-2 min.
I-405	Bothell to Bellevue (AM)	9.7	20 min.	19 min.	-1 min.	142	127	-7%	27 min.	26 min.	-1 min.
SR-167	Renton to Auburn (PM)	9.8	22 min.	19 min.	-3 min.	133	92	-18%	39 min.	37 min.	-2 min.

**95% Reliable Travel Times: You can expect to be on time for work 19 out of 20 working days a month (or 95% of your trips,) if you allow for the 95% Reliable Travel Time.*

The travel times in the above table are the highest recorded travel times measured during the AM or PM peak period. These travel times represent the worst case congested condition.

New Dynamic 95 Percent Reliable Travel Time Service – Now Available On-line

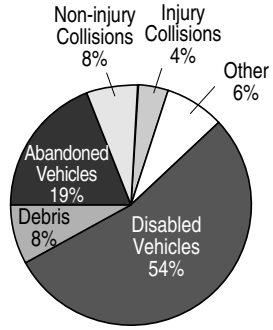
Over the past year, WSDOT has continued to refine and enhance real time commuter information and has developed a new web page that provides a specific 95% Reliable Travel Time. It allows the commuter to pick one of 11 Puget Sound commute routes, the direction of travel and the time they need to arrive. The result will be the suggested time needed to begin the commute in order to arrive on time 95% of the time. The 95% Reliable Travel Times are available in 5-minute intervals (from 6 am to 7 pm). The commuter will need to add the time necessary to travel to the chosen commute route from their point of origin, and again for when they leave the commute route to their destination.

To calculate the 95% Reliable Travel Time for your commute, visit: www.wsdot.wa.gov/pugetsoundtraffic/traveltimes/reliability.

Incident Response: Quarterly Update

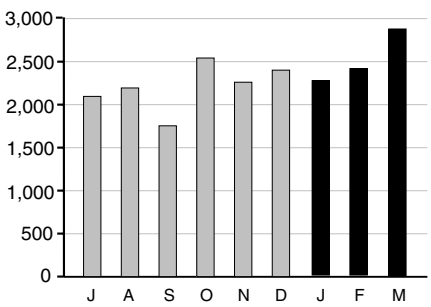
Program Totals

The Incident Response (IR) Program Totals graph shows the first quarter of 2003 compared to the baseline that began in July 2002, with the rollout of the expanded Incident Response program. The IR Program Totals includes all types of responses and incident durations.



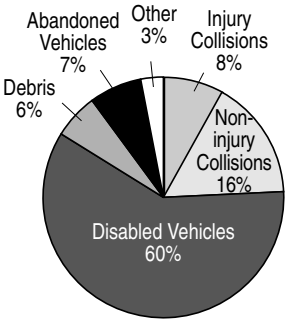
Fatal Collisions are less than 1%

Total Number of Responses by Month
July 2002 to March 2003

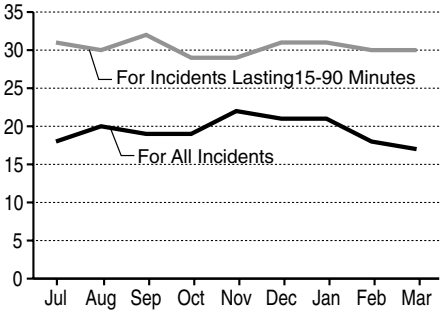


Incidents Lasting 15 to 90 Minutes

Incidents that last more than 15 minutes typically have multiple responders and/or other jurisdictions (e.g., WSP, Registered Tow Truck Operators, etc.) working collaboratively to clear the scene. WSDOT is taking a closer look at these types of incidents in order to find ways to further reduce the time it takes to clear these incidents.

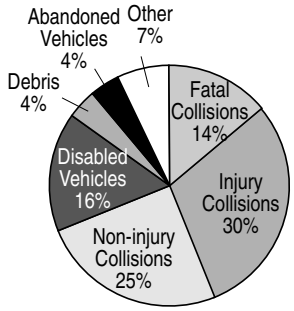


Incident Response:
Average Clearance Time (Minutes)
July 2002 to March 2003

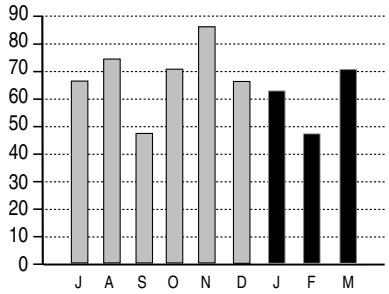


Clearing Incidents Within 90 Minutes

Incidents that last 90 minutes and longer are the most severe and often involve collisions. These incidents are being monitored as required in the Joint Operations Policy Statement between WSDOT and the WSP in order to find ways to further reduce the time it takes to clear these incidents.



Number of Over 90-Minute Incidents
July 2002 to March 2003



Examples of Incidents Over 90 Minutes

- January 6 – A semi traveling east on SR 14 near Forest Hill ran into the ditch causing the truck and trailer to come apart. It took 12 hours and 22 minutes to clear the scene.
- January 18 – A vehicle traveling west on SR 164 (Enumclaw Rd. near Auburn) collided with a power pole, closing lanes in both directions. The pole was damaged enough to need replacement. A WSDOT Incident Response unit performed traffic control until the power company flaggers arrived. It took 7 hours and 37 minutes for WSDOT to clear the scene.
- January 30 – A vehicle northbound on SR 7 near 224th St. sideswiped 2 vehicles and collided with a third, ran over the signal controller, blacking out the intersection, and came to rest after hitting the gas pumps at the Shell station. Injured driver indicated there was a bomb in the vehicle. WSDOT evacuated the area and closed the highway until the WSP bomb squad arrived and cleared the vehicle. It took 8 hours to clear the scene. No bomb was found.
- March 3 – A semi hauling a low boy trailer with an oversized load traveling north-bound on I-5 just South of Chehalis broke loose and high-centered on the left side of the off ramp. WSDOT was not notified for almost 10 hours that the incident had occurred. Total clearance time was 18 hours and 30 minutes.
- March 9 – A vehicle lost control traveling southbound on I-5 near Chehalis hit the median barrier displacing it into the northbound lanes. A semi traveling northbound collided with it and rolled. Numerous vehicles hit the resulting debris. It took 12 hours and 21 minutes to clear the scene.

Non-Collision Responses

Stopped vehicles on freeways and major highways – in a travel lane or even on a shoulder – distract approaching drivers, delay traffic, cause back-ups, and pose safety hazards for approaching traffic and for the occupants of the stopped vehicles. Problems on the roadway that lead to stopped vehicles range from major pile-ups to minor stalls. Incident response is a continual task that WSDOT provides with the Washington State Patrol, local fire departments, and others. Every incident response helps limit delay and increase safety. "Helping drivers, clearing roads," the motto of incident response, is a cost-effective highway management strategy – and WSDOT's routine efforts also free up WSP resources for the enforcement activities uniquely in its competence.

Snapshot of Service Actions for Non-Collision Responses

January to March 2003

Total Incident Responses = 7,527

- 929 Collisions
- 6,598 Non-Collisions

Service Actions Taken for Non-Collision Responses

January to March 2003

	Jan	Feb	Mar
Traffic Control	539	435	478
Provided Fuel	200	247	241
Changed Flat Tire	179	167	185
Minor Repair	81	111	102
Pushed Vehicle	121	120	152
Towed Vehicle	58	33	56
Cleared Debris	204	237	306

New Service Patrol and Motorist Assistance Van Contracts Awarded

The Registered Tow Truck Operators (RTTO) Service Patrols rolled into action on March 24, 2003 with a new contract that replaced the Service Patrol Pilot Project contract that began in July 2000. The new contract creates a partnership between WSDOT and the private tow industry in order to augment the roving Incident Response Teams during peak traffic periods.

The Mixx 96.1 Motorist Assistance Van (MAV) also rolled into action in Olympia under a new service contract for the MAV Pilot Program, which also began on March 24, 2003. The Mixx 96.1 MAV will obtain and report traffic flow information to WSDOT and will provide media coverage for WSDOT's Incident Response program.

Hansen's Towing deploys two trucks in the Seattle area and Bill's Towing deploys one truck in the Tacoma area.

Jack Archer and his Mixx 96.1 Freeway Hero MAV.

Separately, WSDOT also contracts with the Washington State Patrol to deploy two Cadet Service Patrol units in the Seattle area and one in the Tacoma area, both during peak traffic periods.

WSP Cadets and RTTO Service Patrols responded to more than 4,000 Incidents during the 2002 phase of the pilot program.

Incident Management Assessment Identifies Areas for Improvement

The Federal Highways Administration (FHWA) recently initiated a national "self-assessment" of multi-agency programs, which manage traffic incidents. The Traffic Incident Management Self-assessments were conducted in the 75 most congested metropolitan areas throughout the country – the Seattle / Tacoma region being number 13 on the national list. WSDOT led local agencies in a regional self-assessment in March 2003.

The purpose of the self-assessment tool is to identify areas for improvement; to identify areas for which FHWA can provide training, guidance or funding, and to give FHWA a baseline for future re-measurement. The local assessment overall program score was 63.2 percent, which is very good compared with many other states, but shows that there is room for improvement.

Environmental Programs: Management System

A formal Environmental Management System (EMS) is a tool used by enterprises across the country and around the world to improve environmental performance and compliance. An EMS generally is made up of seven building blocks specifically focused on a particular line of business or activity. These seven building blocks are:

- Written procedures
- Training
- Monitoring
- Corrective Action
- Record Keeping
- Performance Measurement
- Auditing

In the EMS now being constructed at WSDOT, current focus is on assembling the seven fundamental blocks in relation to construction, maintenance and operations, the materials lab and modal programs such as Washington State Ferries, aviation, and rail.

Environmental Compliance Assurance: Tracking Violations and Corrective Actions

As an important step in developing a full-scale EMS, WSDOT in September 2002 began an agency-wide effort to consolidate information on environmental violations and compliance activities. This will supplement prior practice where this information was maintained within regional or program offices, which allowed little opportunity to note trends and develop performance measures to strengthen the agency's overall environmental compliance and performance.

The effort that began in 2002 included data collection for a 2001 and 2002 agency baseline, and relied on localized record-keeping and personal interviews with managers around the agency. The resulting baseline information is shown on the next page.

Violations and Compliance: Whence the Rules?

Laws

Many laws establish (either through statute or administrative regulation) prescriptive requirements and prohibitions to protect the environment. When they apply to WSDOT, they generally apply to everyone else, too. It is, for example, a violation of the Clean Water Act for any person (including the Washington State Ferries) to allow hydraulic oil or diesel fuel to be spilled into the navigable waters of the United States. The law is violated when such an event occurs; serious legal consequences can follow.

Example of an activity — operating ferry terminal ramps — where WSDOT is not required to have an environmental permit, but is required to comply with environmental regulations to protect water quality.

Permits

WSDOT does not require a permit to load fuel on the ferries. But it does require a permit for the routine discharge of stormwater into streams or other water bodies from a highway drainage conduit. State and federal permit requirements cover everything from maintenance activities in streams and wetlands to the cutting of trees for highway construction and the management of stormwater runoff from highways. Many permits are issued with specific terms and conditions (for example, stream protection conditions for placing of rip rap around a bridge abutment). Some permit conditions are "boilerplate;" others are intensively negotiated on a situation-by-situation basis. In any event, the permit condition is violated if WSDOT fails to meet the requirement. Again, serious legal consequences can follow.

Example of a maintenance activity — work in waters — where WSDOT is required to have a permit.

Environmental Compliance Assurance: Tracking Violations

WSDOT self-monitors for "non-compliance events," whether or not such matters are actually taken up as formal "violations" by regulatory agencies or officials.

In 2001, WSDOT had 17 non-compliance events, with 15 of those events resulting in a formal violation. In 2002, WSDOT had 29 non-compliance events, although only 14 of those events resulted in a formal violation. This data includes reporting from construction, maintenance, and the ferry service.

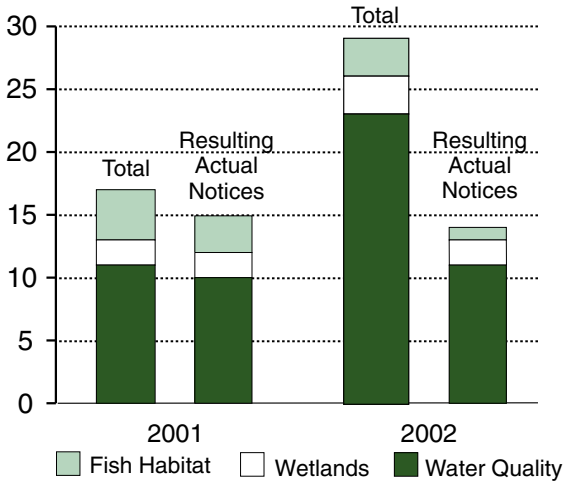
Most of the non-compliance events involved water quality regulations (11 in 2001 and 23 in 2002). Wetland regulations were associated with two of the non-compliance events in 2001 and three of the events in 2002. The balance of non-compliance events was related to regulations protecting fish habitat (four in 2001 and three in 2002).

The 2002 data shows a significant increase in total non-compliance events over those reported in 2001. Most of the increase is related to water quality violations associated with road construction projects, including both accidental spills and violation of water quality standards. The number of non-compliance events at Washington State Ferries dropped slightly from 2001 to 2002.

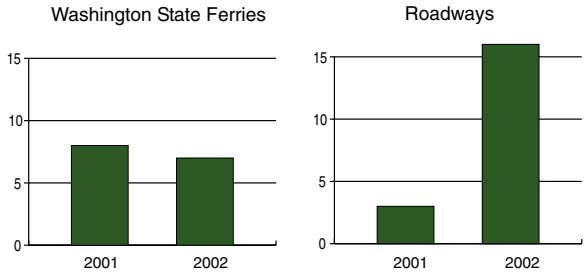
Non-compliance events related to wetlands and fish habitat remained relatively stable from 2001 to 2002.

Data for 2001 and 2002 were obtained through an interview process initiated in September 2002. Since these data represent project managers' "best memory" of the occurrence of a particular event, the increase in reported events in 2002 could be related, in part, to people's ability to recall more recent events.

Non-Compliance Events
2001-2002



State Water Quality Standards and Clean Water Act Non-Compliance Events



Source: WSDOT Environmental Affairs Office

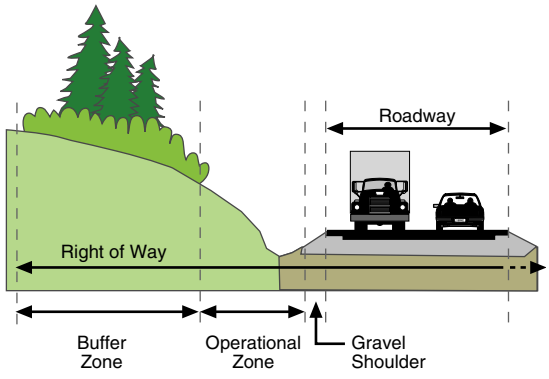
Integrated Vegetation Management

In addition to the compliance measures described above, WSDOT also tracks compliance with herbicide and pesticide application laws covering the products and procedures used to maintain roadsides and wetland mitigation sites. Over the last two years there were nine non-compliance events (all formal notices), three of which were overspray violations affecting upland vegetation. The remaining non-compliance events were failures that did not impact the environment (inaccurate record keeping, failure to use gloves during application, failure to post correct phone numbers on equipment). WSDOT believes that none of the non-compliance events directly affected wetlands, fish habitat, or water quality.

In 2002, the number of violations dropped by one from 2001, although as shown in the table below, the number of herbicide applications actually increased.

All of these matters are under close review as WSDOT intensifies its Integrated Vegetation Management program for 2003 with the intention, among other things, of relying on no greater quantities of herbicide than necessary for vegetation management purposes.

	2001	2002
Non-Compliance Events	5	4
# Product Applications	2,271	3,399



Gravel Shoulder – Vegetation Free Area
Maintained with herbicides where necessary to allow surface water drainage off the pavement and into the ditch.

Operational Zone – Grass or Small Trees and Shrubs
Herbicides are used very selectively for control of noxious weeds, and sometimes for brush control.

Buffer Zone – Natural/Native Vegetation
The IVM approach encourages stable self-sustaining vegetation with limited use of mowing, herbicides, tree removal and other methods as necessary.

EMS Compliance Assurance Procedures

Four components of the EMS approach have received special attention as WSDOT has worked toward EMS implementation in recent months.

Written Procedures

In March 2003, Environmental Compliance Assurance Procedures were issued for construction, maintenance, and Washington State Ferries. These procedures provide guidance to help employees recognize, avoid and correct non-compliance events. The procedures outline for everyone, from field staff to executive management, a clear, consistent process for reporting and managing non-compliance events.

Unauthorized placement of fill below the ordinary high water mark of Issaquah Creek (right side of photo) under the Sunset Interchange.

Training

Training in the new compliance assurance procedures will be incorporated into 21 courses offered to different levels of staff throughout the agency and to our liaisons at the resource agencies. Ten of the 21 courses are already being offered, and five additional courses are in development. Six more needed courses have been identified; they will be developed soon. Since issuance of the compliance procedures, 850 of approximately 1,200 regional engineering and environmental staff have received instruction on the procedures.

Record Keeping (Tracking)

Paper tracking of compliance events will be replaced by an interim, on-line database in May 2003. This interim database is expected to be upgraded in October to an Environmental Permit Compliance System (EPCS), which will enable WSDOT to track environmental permit features (such as time required to obtain permits, monitoring and condition requirements, etc.) and correlate permit conditions and requirements with non-compliance events.

Auditing

WSDOT is working with the resource agencies to develop an auditing procedure that would include an annual audit of both open and recently closed WSDOT construction sites, and an annual evaluation and comparison of non-compliance event data recorded by WSDOT and the resource agencies.

See Protecting Streams from Construction Site Erosion and Runoff, *page 20, for an update on the inspection of 29 WSDOT construction sites.*

Environmental Programs: Environmental Impact Statement (EIS) Tracking

WSDOT and others analyze impacts of proposed transportation projects under the National Environmental Policy Act (NEPA), and its state counterpart, the State Environmental Policy Act (SEPA). Particularly over the last decade, NEPA processes have presented many challenges: what should be their scope and level of detail? how much should they cost? how long should they take?

While projects sometimes can be processed under NEPA by an "Environmental Assessment" or categorical exclusion, projects that may result in significant adverse impacts to the environment trigger preparation of a NEPA *Environmental Impact Statement* (EIS). The essentials of a project – including measures to avoid impacts and the major environmental as well as transportation features – are defined in the EIS documents. The process covers potential environmental impacts (not only on water and air quality or on endangered species, but also on cultural resources and on low income or minority communities,) and how those impacts might be avoided, minimized or mitigated. Resource and regulatory agencies, tribes, other governmental entities and the public at large are all involved in developing EISs.

Important Step in Project Delivery

Before finalizing a project's design, environmental assessment and documentation including an EIS if required, must be completed. Delays in completing these documents stall other activities required to deliver the project. This is evident in FHWA's findings in a national study of experience around the country that it takes nine to 19 years to plan, gain approval for, and build a new federally-funded project with significant environmental impacts ("Timely Completion of Highway Construction Projects," GAO-02-1067T, 2002).

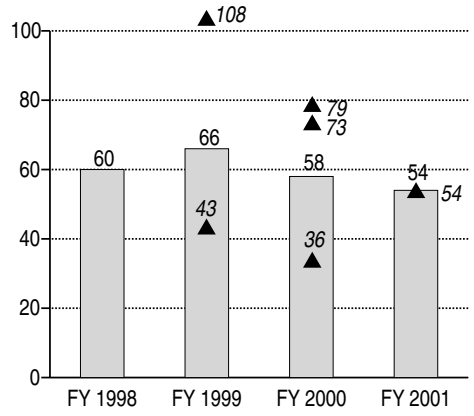
In Washington, EIS processing times are longer than the national medians compiled by FHWA. This, however is a common experience among the other western states (FHWA, Berger Baseline Studies, 2003). Endangered species issues also complicated project delivery in this state.

Next Steps

WSDOT is working to implement a tracking system for environmental documents under development. To improve EIS completion times, WSDOT's next step is to negotiate timelines with the key resource and regulatory agencies.

National Median Processing Times for Environmental Impact Statements

Number of Months



▲ *WSDOT Actuals for completed EISs each year*

Source: FHWA 2002 Milepost Report

By 2007, FHWA hopes to achieve two performance goals demonstrating improved timeliness of environmental process:

- Decreasing the median EIS completion times from 54 to 36 months.
- Negotiating and meeting 90% of EIS production schedules.

FHWA Analysis

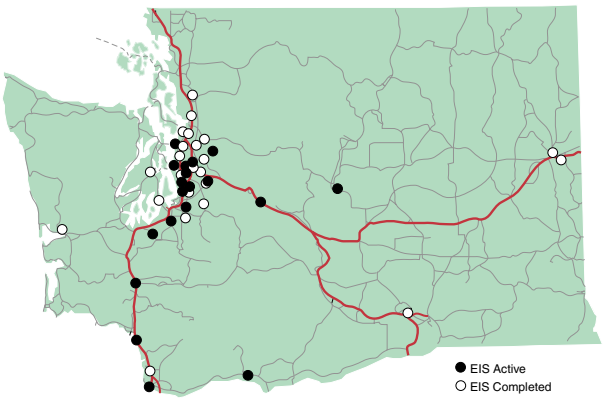
NEPA-Related Factors Contributing to Delay of Transportation Projects:

- Lack of funding for EIS, or low priority;
- Local controversy;
- Complex project, no specific reason.

Other delay factors included: Resource agency reviews and tribal consultation, wetlands, environmental justice issues, changes in project scope, and poor consultant work.

Source: September 2000 FHWA review of 89 EIS Projects in progress 5 years or more without a Record of Decision (ROD)

WSDOT Active and Completed EISs



Since 1989, WSDOT has completed 24 NEPA EISs. In addition, 19 EISs are in development (or active status) at this time.

Environmental Programs: Protecting Streams from Construction Site Erosion and Runoff

Erosion control at construction sites is an important WSDOT responsibility for stream protection. Previous editions of the *Gray Notebook* have included information on assessing construction site erosion control efforts and monitoring stormwater runoff. In the fall of 2002, all 29 moderate and high-risk construction sites were visited and assessed for the thoroughness of erosion plans, plan implementation, and effectiveness of protection measures.

Compliance

The following table shows compliance with minimum requirements that the Department of Ecology requires WSDOT to include in its erosion control plans, plus internal performance measures* from WSDOT's erosion control program.

Erosion and Sediment Control Requirements	Percent of 29 projects that are in compliance
* Contractor trained in proper use of erosion/sediment control measures	100%
Clearing limits/sensitive area boundaries identified and respected by contractor	100%
Utility trenches excavated in a manner to reduce erosion risk	100%
Water removal processes minimize erosion and sedimentation risks	100%
Construction access routes stabilized to prevent tracking of mud onto streets	98%
Effectiveness of sediment trapping measures	96%
Effectiveness of erosion control measures	91%
Sediment trapping measures installed prior to soil disturbing activities	90%
Stormwater conveyance channels stabilized	90%
Flow controlled to minimize offsite erosion	87%
* Would runoff meet water quality standards if storm occurred (no last-minute changes needed)	86%
Would adjacent property and water bodies be protected if storm occurred (no last-minute changes needed)	83%
Erosion and sediment control measures removed when no longer needed	81%
Protect storm drains from sediment	74%
Erosion and sediment control measures properly maintained	70%
Protect cut & fill slopes from concentrated stormwater runoff	67%
* Amount of disturbed soil actually covered with erosion control measures	65%
* Erosion control plans are on site and up to date	56%

Assessment Results

Of the 29 projects assessed, 23 successfully prevented erosion. Four had minor problems that were corrected without regulatory agency involvement or significant repair costs. Two had major problems triggering regulatory agency involvement.

There is room for improvement. With a baseline established, WSDOT is focusing training, planning, and contract enforcement on issues most needing improvement. Future results will be compared to this baseline. WSDOT will also use water quality monitoring data (see the *Gray Notebook* from December 31, 2001, page 21) to verify that the assessment program accurately reflects the effectiveness of plans in protecting water quality.

Example Sites

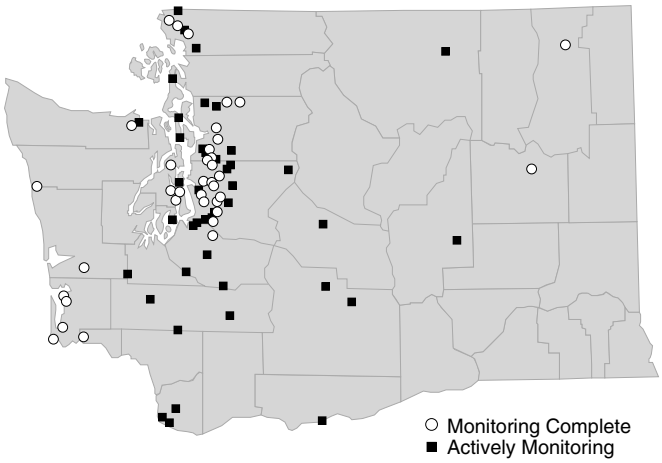
This steep slope near Mukilteo is typical of sites that can cause minor erosion problems. Erosion blankets made of plant fibers and grass seeding can prevent problems. The rock channel conveys water away preventing further erosion.

WSDOT experienced major challenges removing this bridge over the Spokane River. Pier removal activities noticeably muddied the water and heightened concern among regulators. Water quality monitoring data (like that shown in the December 31, 2001 *Gray Notebook*), however, showed that the project met water quality standards.

Environmental Programs: Replacement Wetlands

WSDOT has been mitigating for unavoidable wetland loss with replacement wetlands for more than a decade. The state's Executive Order 89-10 mandates that the actions of state agencies result in no net loss of wetlands. During the permitting process for replacement wetland sites, *success standards* are developed and the *monitoring period* is determined. After construction, data is collected and analyzed to determine if success standards are being met. If regulatory requirements are met at the end of the monitoring period, the replacement wetland is considered successful, and *monitoring is complete*. Monitoring and reporting on the status of replacement wetlands is critical to the success of the program as seen by both the public and the resource protection agencies.

WSDOT Replacement Wetlands
1988 - 2002



Types of Mitigation

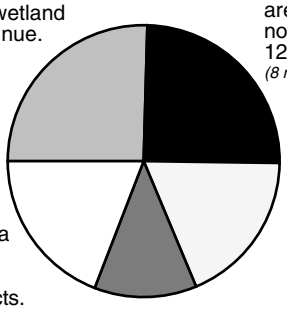
When impacts to wetlands are unavoidable, wetlands are enhanced, restored, created, or preserved to achieve the no net loss policy. In this effort, WSDOT uses a variety of strategies including mitigation banking and advance mitigation. Mitigation banking compensates for many small impacts in one mitigation site in advance of a transportation project. Advance mitigation is building replacement wetlands before unavoidable impacts take place.

Since 2001, monitoring has begun on 5 recently constructed replacement wetlands comprising 16 acres in total. For additional detail on monitoring replacement wetlands and pictures of the different types of projects, see *The Gray Notebook* for the quarter ending March 31, 2002, page 14.

WSDOT Replacement Wetlands: 1988-2002
Total Acreage of Wetland Projects
101 Sites, 476 Acres

Preservation
Protecting wetlands from future development insures that valuable wetland functions continue.
117 Acres
(same as March 2001)

Creation
The establishment of wetland area and functions, where none previously existed.
122 Acres
(8 more acres since March 2001)



Buffer
An upland area that protects a wetland from adverse impacts.
91 Acres
(3 more acres since March 2001)

Enhancement
Improvements to an existing degraded wetland to increase or augment wetland function.
89 Acres
(4 more acres since March 2001)

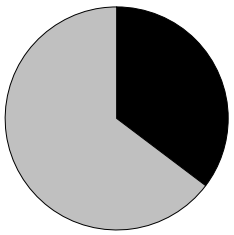
Restoration
Reestablishes a wetland area and/or function, where wetlands previously existed but were no longer present.
57 Acres
(1 more acre since March 2001)

Meeting Standards in 2002

In 2002, biologists monitored a total of 46 *active* replacement sites, ranging from one to seven years in age. Of these, 17 sites had a total of 56 individual success standards to be met in 2002. See the next page for the success rate of sites that have *completed monitoring*.

Replacement Wetlands: 2002 Standards
Number of Sites: 17

11 Sites Met Some Standards
31.02 Acres



6 Sites Met All Standards
15.22 Acres

WSDOT reported to regulators the results of sites with standards to be met in 2002 on a site by site basis in the 2002 Annual Monitoring reports. Visit www.wsdot.wa.gov/environment/eao/wetmon/#2002%20Sites for more information about the 2002 results.

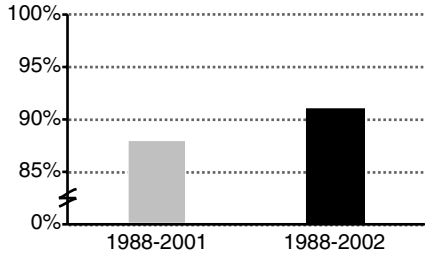
Measuring the Success of Replacement Wetlands

In 2002, WSDOT completed five years of monitoring the highly successful State Route (SR) 18 Pumpkin Patch replacement wetland constructed in 1997 to compensate for improvements to SR 18. The goal was to restore 0.8 acres of wetland that had been converted to agricultural use. Improvement actions included excavating a better connection to an existing wetland associated with the Green River and planting native shrubs and trees. All of the final success standards were met or exceeded during the five-year monitoring period. The chart at right shows WSDOT's overall success rate for sites that have completed monitoring.

Developing success standards for replacement wetlands is an integral part of the wetlands permitting process between WSDOT, the Department of Ecology (DOE), the Department of Fish and Wildlife, the U.S. Army Corps of Engineers (USACE), tribes, cities, and counties. Historically, the most common standards have included water presence and saturated soil, vegetation characteristics (especially for native plant species), and wildlife habitat diversity. Meeting *success standards* is one goal, but achieving planned wetland *functions* is another, as shown in the example on the next page. WSDOT continues to work closely with DOE, USACE and others to develop reliable and ecologically meaningful functions-based success standards.

Replacement Wetlands*: Monitoring Complete

Success Rate



** Includes acreage not yet designated for mitigation credit.*

Source: WSDOT Environmental Affairs Office.

Successful sites have met their regulatory requirements. For unsuccessful sites, it is unlikely that all success standards will ever be met.

From 1988 through 2001, monitoring was completed for 34 sites, of which 30 sites (222 acres) met regulatory requirements and are considered successful.

Four sites (5 acres) had hydrology problems and only met some success standards. There are no practical solutions to "fix" the hydrology at these sites. Hydrology is the most difficult factor of a replacement wetland to predict. For example, one site near Patterson Creek in King County was constructed, and then its source of water was reduced. Another nearby site has experienced more water than expected, and planted woody vegetation has been unable to survive.

In 2002, monitoring was completed on 13 additional sites (23 acres). These sites met their regulatory requirements, bringing the success rate to 43 of 47 sites from 1988 to 2002.

New Directions in Wetland Mitigation

The U.S. Army Corps of Engineers (USACE) recently released new guidance for compensatory mitigation projects, and in conjunction with the Environmental Protection Agency, crafted the National Wetlands Mitigation Action Plan. Both can be viewed at *www.usace.army.mil/inet/functions/cw/hot_topics/corps_epa.htm.*

The action plan's purpose is to improve the performance and results of replacement wetlands. One area of emphasis is increased reliance on functions assessment. Fortunately, WSDOT has anticipated this progression of wetland mitigation science and is already largely in step with the new criteria for measuring and monitoring performance. Examples include:

- WSDOT's *Wetland Functions Characterization Tool for Linear Projects*, developed in 2000, has been recommended for use by resource agencies and the Society of Wetland Scientists to determine the functions of impacted wetlands and replacement wetlands.
- An interdisciplinary team, including federal, state, and local agencies and private consultants, contributed to the widely recognized WSDOT document, *Success Standards for Wetland Mitigation Projects – A Guideline.*
- WSDOT participates in technical committees, such as the recent effort to update the Washington State Wetland Rating System, and the development of the Wetland Functional Assessment Methods, Vol. 1 and 2.

Case Study: Blaine Replacement Wetland

The Blaine replacement wetland illustrates the need for WSDOT and the Wetland Mitigation Technical Group to continue development of functions-based success standards. In 2001 the WSDOT Blaine replacement wetland achieved its planned functions, but did not meet two of its success standards.

The table shows the 2001 success standards for the Blaine site. One success standard required 75 percent cover by native vegetation in the forested and scrub-shrub zones on the site by the fifth year, but the site achieved only 57 percent woody cover. On average, by the fifth year, such WSDOT replacement wetlands sites achieve about 50 percent woody cover. So this site, while not yet meeting the high standard set for it, is still above average. A recent WSDOT study found that most sites do not achieve 75 percent woody cover until the eighth year. The full report, *Benchmarks for Stand Development of Forested and Scrub-Shrub Plant Communities*, can be found at *www.wsdot.wa.gov/eesc/design/roadside/default.htm#sos*. The Blaine replacement wetland should achieve 75 percent woody cover within a few years.

Blaine Replacement Wetland Success

Fifth Year Success Standards	*2001 Results*
Less than 10% cover of reed canarygrass	Not met (21%)
75% native vegetation cover in forested and scrub-shrub zones	Not met (57%)
80% native vegetation cover in emergent zone	Nearly met (79%)
Provide storm-water storage capacity	Standard met
Ponding or saturation to the surface in the spring	Standard met
80% cover by wetland species in emergent zone	Standard met (93%)
50% aerial cover by woody species in forested and scrub-shrub zones	Standard met (57%)
Differences in height between forested and scrub-shrub zones	Standard met

Success standards need to be measurable, achievable and meaningful. Complex natural processes determine how replacement wetlands develop. A decade of experience shows that some standards are not feasible, even for very promising sites. WSDOT continues to work with regulatory agencies to refine approaches for replacement wetlands and has conducted research on older mitigation sites to provide a scientific basis for determining appropriate success standards.

Another success standard required that the site show less than 10 percent cover by reed canarygrass, a widespread invasive grass. The control of tenacious invasive plants is important in replacement wetlands, especially during the period of plant establishment. Despite aggressive weed control efforts, the site in the fifth year had 21 percent cover of reed canary-grass. Where the tree and shrub canopy is developing dense shade, the reed canarygrass is very thin and is not competing successfully with the woody vegetation. This trend is expected to continue. While this success standard was not met, reed canarygrass nevertheless can make a substantial contribution to water-quality enhancement functions in a wetland.

Despite not achieving all of its standards, wetland functions that have been successfully created at the Blaine site include:

- Depressions to hold stormwater runoff, which can lessen downstream flooding.
- General suitability for wildlife habitat, especially for invertebrates, amphibians and wetland dependent birds.
- The potential to improve water quality by removing sediment, nutrients, and toxicants.

For more information about the Blaine replacement wetland, see the WSDOT 2001 Rail Report at *www.wsdot.wa.gov/environment/eao/wetmon/default.htm#2001%20Sites*.

Blaine Replacement Wetland Costs

The costs to build and maintain a replacement wetland can vary greatly, depending on several factors. One variable is the price of land purchased to build a new site. Land is more expensive in Renton than in Skykomish, for example.

Site terrain also makes a difference. When excavation is needed to create wetland in an upland area, the construction cost is greater. The costs of the completed Blaine replacement wetland are shown as an example.

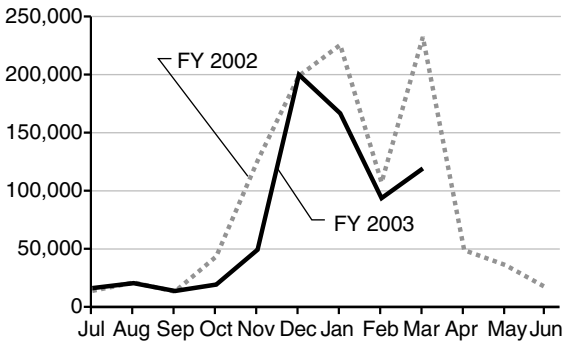
Cost Detail: Blaine Replacement Wetland

Activity	*Cost*
Land purchase	$80,000
Construction and plant establishment	$338,000
Site management and monitoring	$30,500
Total	**$448,500**

Traveler Information

WSDOT supplies traveler information in several formats, including on the Web, via changeable message signboards, highway advisory short-wave radio, and over the phone at 1-800-695-ROAD. Nearly all the traveler information on television and radio news statewide is based on WSDOT information. For an overview, see the September 30, 2002 edition of the *Gray Notebook*.

Number of Calls to 1-800-695-ROAD
Fiscal Years 2002 and 2003

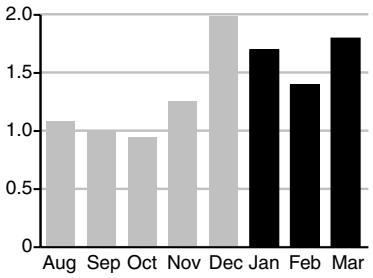


The volume of calls to 1-800-695-ROAD spikes in winter months.

On the Web

WSDOT continues to monitor and establish a baseline of customer usage of WSDOT's traveler information on the Internet. As expected, usage increased with winter storms.

Traveler Website Daily Usage
Average Daily Page Views, in Millions



Milder mountain weather in February meant less use than in the other two months this quarter. The highest number of daily page views (5.4 million) for the quarter came on March 7. The highest number of page views on a Sunday recorded to date happened on January 12 with 2.2 million page views. The camera at Snoqualmie Pass West Summit had more than three times the normal use for a Sunday. Usage was highest from 6 to 11 a.m. in the morning. A possible contributing factor may have been Washington State University students returning to school in Pullman to begin classes the next day.

Source for all charts: WSDOT Communications Office.

Advanced Traveler Information System Case Study

A 1999 case study in the Washington, DC metropolitan area found that travelers using an Internet-based Advanced Traveler Information Service (ATIS) improved their on-time reliability by 5% to 16% compared to travelers not using the service. The study simulated the experience of commuters with a need to be on time using a prospective pre-trip traveler information system. Results from the case study include:

- Peak-period commuters who did not use ATIS were three to six times more likely to arrive late than counterparts who used ATIS.
- Peak-period commuters who used ATIS were more frequently on time than nonusers who scheduled conservatively.
- Late shock, the surprise of arriving late, was reduced by 81% through ATIS use.

More information on this case study is available at www.itsdocs.fhwa.dot.gov//JPODOCS/REPTS_TE/index.html#Table2.7.1.

WSDOT Web Site Feedback

Below is a sample of recent traveler website feedback:

January 4, 2003
I need to thank you for your excellent web pages! So much information! Easy to get around! VERY WELL DONE!!!!!

January 8, 2003
This site is great, it's clear, easy to navigate and has all the info I need. I go from Wenatchee to Seattle every week for business and need pass info in the winter. This site has made getting this info quickly. Thanks for getting it right.

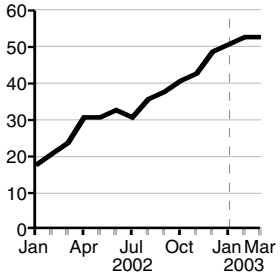
January 12, 2003
Today was the first time I had to send my son back to WSU in the winter and found your website very helpful to know what condition Snoqualmie Pass was in.

January 20, 2003
Just wanted to say the information provided and format is proving to be an excellent tool for a traveler deciding whether to assault the mountain pass roadways or not. This is one of the most useful websites I've ever seen. Thanks.

Commute Trip Reduction: Quarterly Update

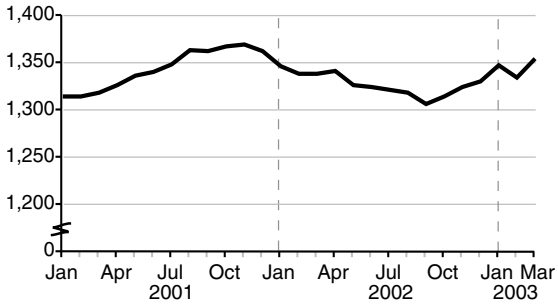
Vanpools in the Puget Sound Region

The number of public vanpools on the road in the Puget Sound Region has increased 3.7 percent since September 2002. In the first quarter of 2003, the King County Metro *VanShare* program continued its upward trend from 2002, while Kitsap Transit added its first *VanShare* group.



***VanShare* Trends**
Number of VanShare *Groups*
January 2002 to March 2003

Source: WSDOT TDM Office.



Puget Sound Vanpool Trends
Number of Operating Vans
January 2001 to March 2003

Source: WSDOT Transportation Demand Management Office.

Quarterly Regional Vanpool Highlights

- WSDOT maintains a fleet of 42 vans intended to help vanpool systems meet short- and long-term needs. At the end of the quarter, 95% of the vans were in use: 20 eight-passenger and 20 15-passenger vehicles were under contract.
- King County Rideshare Operations completed a 12-month Duwamish Rideshare Plus project at the end of March, sponsored by the Manufacturing Industrial Council. Rideshare Plus staff provided personalized ridematching services and promotional incentives to Duwamish commuters and formed one Vanpool group, 7 *VanShare* groups and 23 carpools.
- At the end of the quarter, 213 of Pierce Transit's 216 vans were in operation (98.6 percent use). PT anticipates 100 percent of the vans will be in operation in April and will use reserve fleet vehicles for vanpooling in May while it awaits the arrival of 20 new vans.
- Community Transit finished its vanpool promotion "1.2.3 Free" in March. Fourteen new vanpool groups are on the road and 36 new riders were added to existing vans.

CTR Data Collection Aids Local Jurisdictions and Private Utilities

- Avista Utilities receives a special operating order allowing them to run a thermal energy generating plant beyond the permitted hours. The special order required Avista to develop and implement an environmental project to offset the emissions produced during the additional operating time. As part of this effort, Avista provided funding to Spokane County to expand its CTR program.
- Local governments have made use of the CTR performance measurement to assess the impacts of growth on transportation facilities. The City of Bellevue, for example, calculates that it saves between $40,000 and $50,000 annually because of the data it receives from employers implementing CTR. Without CTR data and the program's collection tools, the City would need to create and manage a different mechanism to monitor its transportation concurrency program required under the Growth Management Act.

Eastgate Park and Ride Expansion

Park and ride lots on the Interstate 90 corridor at Issaquah, Eastgate, South Bellevue, and Mercer Island are frequently full; lack of additional park and ride capacity deters many commuters from making greater use of transit service in the corridor. In 2000, WSDOT partnered with transit agencies in Snohomish, King, Pierce, and Kitsap Counties to determine current and future park and ride needs. The *Puget Sound Park and Ride System Update* projected that the I-90 corridor had the biggest deficit, with demand exceeding supply by more than 1,200 stalls. King County Metro has since revised that number to 2,000 based on current ridership trends and growing demand.

In April 2003, King County Metro began construction of a five-story park and ride garage located at the WSDOT-owned Eastgate facility. WSDOT was also part of the original design team. The surface lot contained 724 parking spaces prior to construction. When the new garage is completed in June 2004, there will be nearly 1,700 spaces on the site – 350 surface stalls plus 1,321 stalls in the new five-story structure. Access, safety, and security features will reflect the suggestions made by users from local communities. Some parking will remain open at the permanent Eastgate lot throughout construction.

Favorable economic conditions for public works projects have already made their mark on the project. Metro budgeted $33 million, including the costs of environmental analysis, site redesign, construction, and other parts of the project. Construction was estimated at $18 million. The winning low bid contractor's bid price for construction was only $13.2 million. The project is expected to take one year.

For more information visit www.metrokc.gov/kcdot/alts/eastgate/easthome.htm.

Construction began as scheduled on April 14, 2003. After erecting construction fencing, the crew from contractor Baugh-Skanska removed old paving from the majority of the site. Much of the pavement will be crushed and reused.

The interim parking lot is being fully utilized.

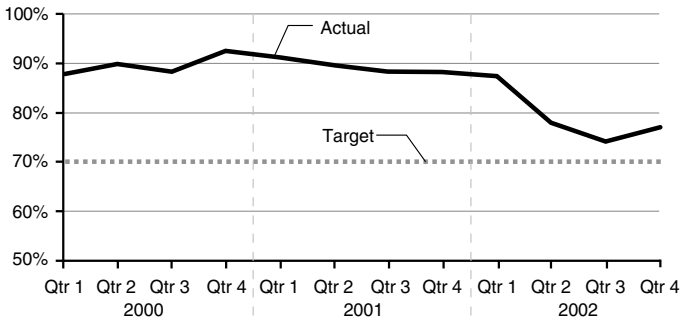
Park and Ride Lot Occupancy at WSDOT-Owned Sites in King County

During the fourth quarter of calendar year 2002, occupancy of the 8,500 parking spaces in the 32 WSDOT lots in King County averaged 77%, marking a slight upswing in usage after several quarters of decline. About 59% of WSDOT's park and ride lots in King County surpassed the target of 70% occupancy during the quarter, up from 53% last quarter. Parked cars regularly exceeded maximum capacity at six lots.

**Data availability has a lag of three months to allow the transit systems to collect and analyze the data. Data for the first quarter of 2003 will be available in the next* Gray Notebook.

WSDOT-Owned King County Park and Ride Lots

*Percent of Capacity Used: 2000-2002**



Source: WSDOT analysis of King County Metro data.

Washington State Ferries: Quarterly Update

Customer Feedback

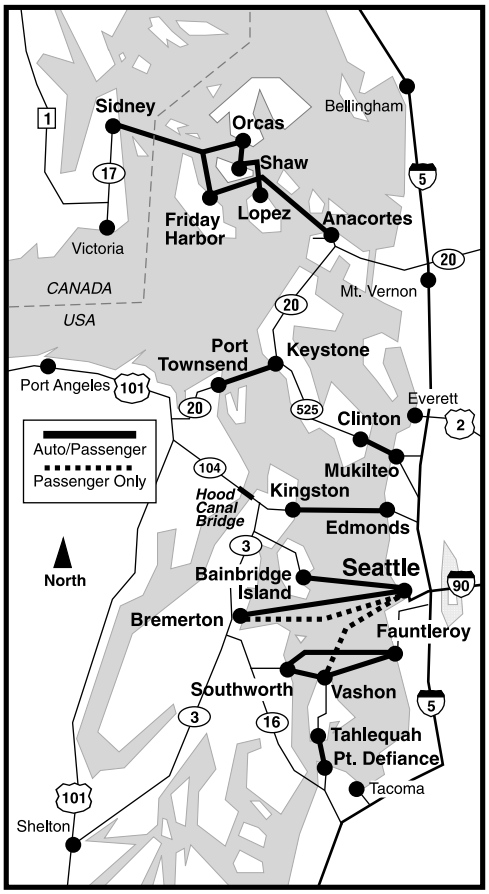
WSF collects customer complaints, compliments, comments, and suggestions. This information is recorded in the Automated Operating Support System (AOSS) database for measurement and action, based on date base cross tabulation and analysis.

The charts show trends in the data for the last four fiscal years and the first three quarters of fiscal year 2003 (July 1 – March 31, 2003).

Customer complaints were down for the second consecutive quarter and down 19 percent from the preceding quarter.

Complaints were down in nearly every category. Bicycle issues were down 70 percent, food service complaints down 68 percent, and facilities / vessel issues were down 74 percent from the preceding quarter. Numbers of ticket-related complaints were very similar to last quarter.

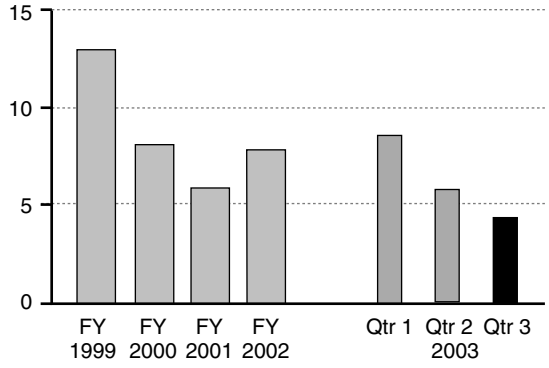
In one category not shown below, complaints regarding smoking issues were up 139 percent over the preceding quarter. A total of 13 smoking issue complaints were received in this quarter.



The ferry Wenatchee

Total Customer Complaints

*Complaints per 100,000 Customers**

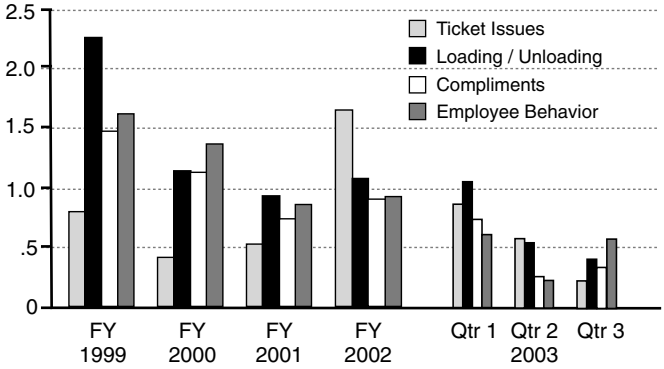


**Does not include compliments or suggestions.*

Source for all charts: WSF.

Most Common Customer Comments

Top Four Comment Types per 100,000 Customers



On-Time Performance

The table below compares WSF on-time performance for the third quarters of fiscal years 2002 and 2003. Overall performance improved over last year for two major reasons. On-time performance, the most important factor influencing customer satisfaction, has been increasingly emphasized since 2000. Also, a drop in the number of ferried vehicles reduced loading times.

The almost two-minute improvement on the international run is due to reduced processing time for Canadian Customs and U.S. Immigrations in Sidney, B.C. resulting from recent security improvements. Improvement on the Point Defiance-Tahlequah run is due to the *Quinault* (10 knot vessel) replacing the *Rhododendron* (8 knot vessel) for 30 days while the slower vessel was in maintenance.

On-Time Performance Delivery

	Third Quarter Fiscal Year 2002			Third Quarter Fiscal Year 2003		
Route	Number of Trips	Percent of Trips Within 10 Minutes of Schedule	All Trips Average Delay From Scheduled Sailing Time	Number of Trips	Percent of Trips Within 10 Minutes of Schedule	All Trips Average Delay From Scheduled Sailing Time
San Juan Domestic	6,443	94%	2.7 minutes	5,057	90%	2.5 minutes
International Route	176	84%	3.7 minutes	59	93%	1.9 minutes
Edmonds/Kingston	4,564	94%	3.1 minutes	4,384	97%	2.5 minutes
Passenger-Only: Seattle/Bremerton	1,564	95%	2.8 minutes	1,634	97%	2.5 minutes
Passenger-Only: Seattle/Vashon	1,041	94%	2.4 minutes	982	98%	1.9 minutes
Fauntleroy/Vashon/Southworth	9,534	91%	4.3 minutes	10,197	94%	3.2 minutes
Keystone/Port Townsend	1,852	96%	2.4 minutes	1,701	96%	2.4 minutes
Mukilteo/Clinton	6,178	98%	2.0 minutes	5,450	99%	1.8 minutes
Point Defiance/Tahlequah	2,708	93%	4.0 minutes	2,702	95%	3.2 minutes
Seattle/Bainbridge Island	4,031	96%	2.8 minutes	3,806	97%	2.7 minutes
Seattle/Bremerton	2,563	98%	2.7 minutes	2,449	98%	2.2 minutes
Total	40,654	94%	3.0 minutes	38,421	95%	2.6 minutes

A trip is considered to be on time if it departs within ten minutes of the published scheduled sailing time. Missed trips are not reported in this measure. They are included in the following measure (Trip Reliability).

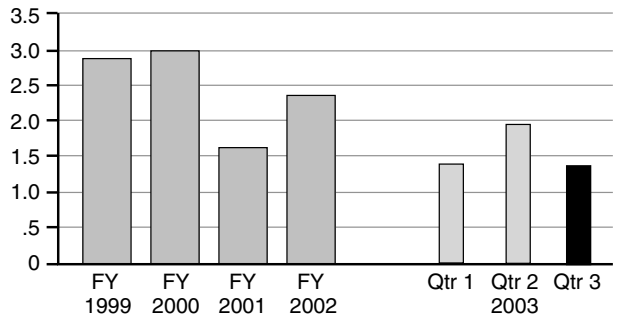
Trip Reliability

WSF scheduled 42,627 trips during the third quarter of fiscal year 2003. Of these trips, 161 were cancelled.

The chart below shows a system-wide average reliability index. Assuming that a commuter worked 200 days per year and made 400 trips on WSF, the statistical likelihood is that 1.5 ferry trips would be cancelled. This rating represents a 22% higher reliability rating than the preceding quarter. Additionally, this rating represents a 43% increase in reliability over the same period in fiscal year 2002. The increase in trip reliability is directly related to high vessel reliability. There have only been 2 other FY quarters in the last 17 quarters with fewer trips cancelled due to vessel failures.

Trip Reliability Index

Missed Trips per 400 Sailings

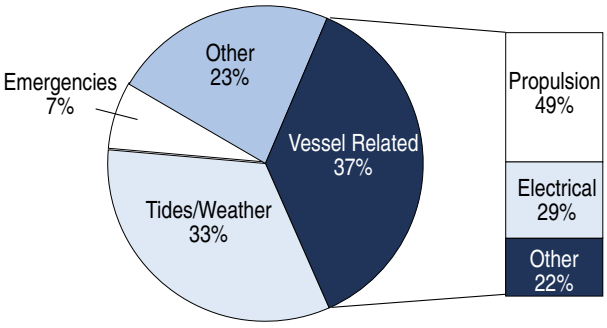


$$\text{Trip Reliability Index Number} = \frac{\text{Cancelled Trips}}{\text{Total Scheduled Trips}} \times 400 \text{ (Average Annual Number of Commute Trips)}$$

Source: WSDOT / Washington State Ferries.

Most Common Trip Cancellation Causes

Third Quarter, Fiscal Year 2003



Total cancellations were down 52% compared to the same period last year. Two Evergreen state class vessels serving the busy Fauntleroy – Vashon – Southworth routes accounted for approximately one half of all electrical related trip cancellations. Electrical problems on the Tillikum (Jan 11) and the Evergreen State (Jan 24) were repaired quickly, but due to the trip volumes on this route resulted in a total of 16 missed trips. This triangular route annually accounts for ¼ of all trips system wide.

Ridership and Revenues

The Legislature's Joint Task Force on Ferries (JTFF), comprised of legislators, citizens, ferry management, and ferry workers was formed in 2000. The Task Force reviewed the workings of the WSF system and made recommendations including tariff increases designed to raise the farebox recovery rate to 80 percent of operating costs over six years. The Transportation Commission instituted this recommendation and approved tariff increases of 20 percent in June 2001 and 12.5 percent in May 2002.

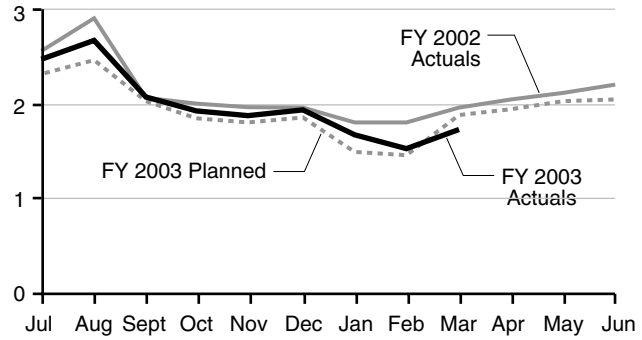
New tariffs were designed to recover higher total revenues even though the number of riders might fall slightly when the price of the trip went up. WSF anticipates ridership will fall from the previous year because of the fare increase and that the amount of total fares would go up.

Fiscal year to date, ridership has exceeded the plan by 4 percent or 737,000 riders. Revenues have exceeded the plan by 4.2 percent or $3.5 million (based on June, 2002 forecast).

Although actual ridership has exceeded the plan for the first nine months of fiscal year 2003, March 2003 was the first month in two years where the actuals were lower than the plan. Actual ridership was 3.6 percent lower than plan and nearly 10 percent lower than the same month last year. Contributing factors include weekend service disruptions at Mukilteo due to construction and the fact that Easter Sunday (a high volume weekend) occurred in April this year and March last year.

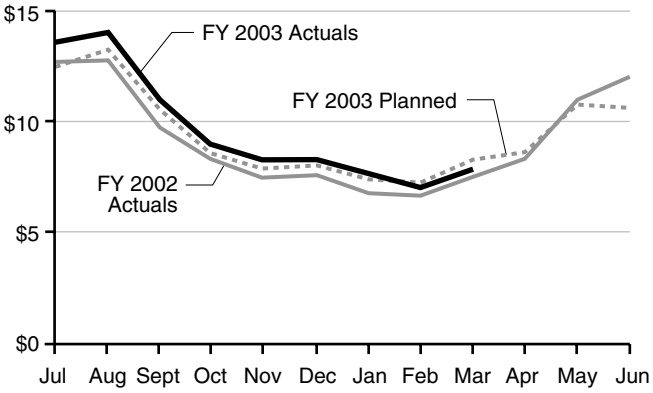
Ferries Ridership by Month

In Millions



Ferries Farebox Revenues by Month

Dollars in Millions



Capital Expenditure Performance

WSDOT makes capital investments in the ferry system through the Washington State Ferries Construction Program. The program preserves existing and builds new ferry terminals and vessels. This infrastructure program supports the ferry system's delivery of responsible and reliable marine transportation services.

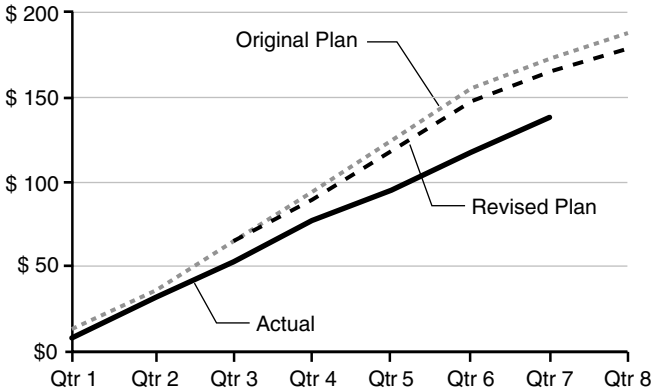
At the end of the 7th quarter of the 2001-2003 biennium, the program has spent $139.3 million (84%) of its planned biennial expenditures of $165.8 million. The program's projected under spending is due to the decision not to acquire a replacement vessel for the *MV Kalama* and *MV Skagit*, cancellation of the project to upgrade the *MV Chelan*, and deferral of the *MV Elwha* Propulsion Control Project to the 2003-2005 biennium.

"Original Funds Available" are based on the Capital Improvement and Preservation Program adopted by the Transportation Commission in October 2001.

"Planned Biennial Expenditures" reflect a $10 million appropriation reduction enacted by the 2002 Legislature.

WSF Construction Program Expenditures

2001-2003 Biennium, Quarter 7, ending March 31, 2003
Planned vs. Actual



Program expenditures are grouped into spending on terminal construction, vessel construction, and emergency repairs of terminals and vessels.

Sources for all charts: WSDOT / Washington State Ferries.

State-Supported Amtrak *Cascades* Service: Quarterly Update

Ridership

Ridership on state-supported Amtrak *Cascades* trains was 84,009 for the first three months of 2003. This is essentially no change from the same period in 2002. The steady ridership level occurred despite the region's ongoing economic recession and traveler concerns stemming from international events.

WSDOT's Schools on Trains program made a significant contribution to ridership. More than 2,500 students from 56 schools rode the Amtrak *Cascades* in January, February and March 2003.

Other actions taken to support ridership and market visibility for the Amtrak *Cascades* in the first three months of 2003 included cooperative promotions with Snohomish County Tourism, the Seattle King County Convention and Visitors Bureau, the Tacoma Rainiers, and the Washington State History Museum.

On-time Performance

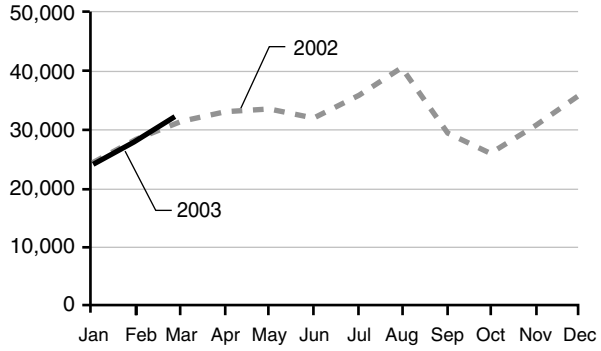
On-time performance for state-supported Amtrak *Cascades* trains averaged 78.4 percent for the first three months of 2003. This represents an improvement over the first three months of the preceding year, when the on-time performance averaged 72.2 percent. The majority of the delays were caused by interference with freight trains and speed restrictions through areas where rail line repair and upgrade work was taking place.

Customer Satisfaction

Amtrak's Customer Satisfaction Index (CSI) is based on surveys of riders using the service. The scores represent three-month rolling averages. The CSI goal for the Amtrak *Cascades* is a score of 92 or better. In the most recent survey period, the average score for the Amtrak *Cascades* was 89, which was the same score for the preceding survey period and one of the highest scores in the nation. Customers expressed high degrees of satisfaction with the trains' smooth and comfortable ride, the friendliness and helpfulness of train conductors, and information provided on train services and safety. Areas needing improvement include the quality and variety of on-board food.

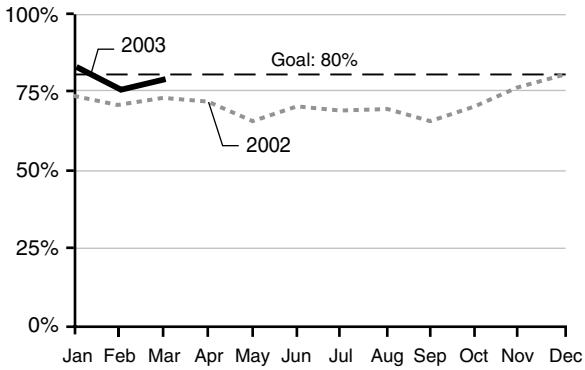
WSDOT also gathers information directly from Amtrak *Cascades* riders through on-board customer comment cards. Feedback taken from these comment cards during the first quarter of 2003 included

State-Supported Amtrak *Cascades*
Monthly Ridership
Number of Passengers



Source: Amtrak and WSDOT Rail Office.

State-Supported Amtrak *Cascades*
On-Time Performance
2003 vs. 2002 Percent On-Time
2002 Average: 70.8%



The on-time performance goal for the Amtrak Cascades is 80% or better. A train is considered on-time if it arrives at its final destination within 10 minutes or less of the scheduled arrival time.
Source: Amtrak and WSDOT Rail Office.

numerous requests for more service between major cities, better on-time performance, and smoother reservation and ticketing processes. WSDOT is working with Amtrak and others to address these issues.

The Future of Amtrak

WSDOT partners with Amtrak to operate Amtrak *Cascades* service between Portland, Seattle, Bellingham, and Vancouver, BC. Amtrak is also responsible for long-distance routes that serve Washington State, including the *Coast Starlight* and the *Empire Builder*. In February 2003, Congress and the Bush Administration approved $1.05 billion in funding for Amtrak through September 2003. As part of the funding agreement and the railroads' ongoing reform activities, Amtrak is required to provide extensive reports to Congress and the Administration, including detailed business plans.

It is anticipated that improved information-sharing between the railroad and the federal government will help Congress and the Administration gain a better understanding of the nation's passenger rail network and the investments necessary to make it a more viable transportation option for the traveling public.

This same funding package approved by Congress and the Bush Administration included $31.8 billion for federal highways, $13.6 billion for aviation, and $7.2 billion for transit through September 2003.

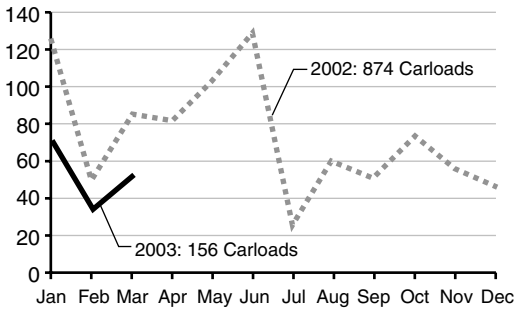
Washington Grain Train Update

In the first three months of 2003, the Washington Grain Train carried 156 carloads of grain to Columbia River ports. This represents a 39.5 percent decline over the same period in 2002.

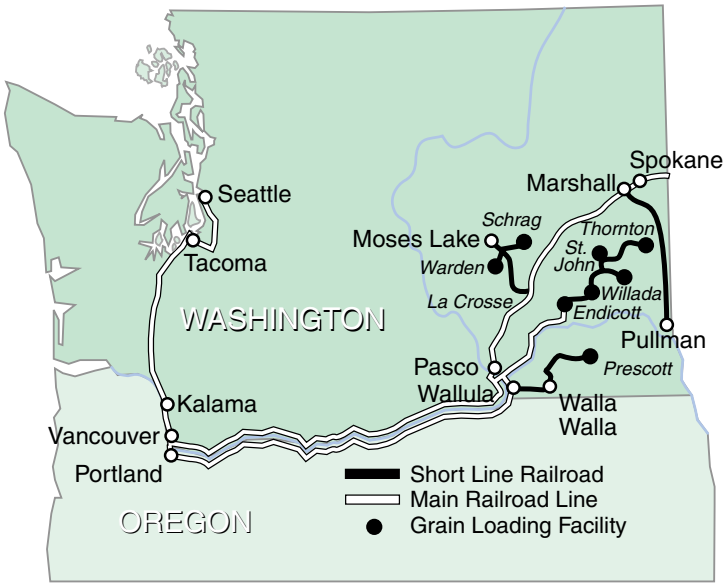
The decline in grain train car loadings was caused by the Union Pacific Railroad taking longer than usual to cycle full 25-car sets between eastern Washington and Columbia River deep water ports. Corrective measures have been implemented and grain train car loads are beginning to rebound. WSDOT continues to work with the Union Pacific Railroad to ensure that grain train cars are being fully optimized by shippers using the service.

Washington Grain Train Carloads

Carloads Per Month, 2002 vs. 2003



Source: WSDOT Rail Office.



In March, rail cars for the third Washington Grain Train began arriving in eastern Washington after being delivered free of charge by the Burlington Northern and Santa Fe Railway. The full 29-car set began service between Pullman and the main line connection at Marshall, southwest of Spokane, in April 2003.

The communities that will be served by the third Washington Grain Train are Plaza, Rosalia, Oakesdale, Palouse, and Fallon, Washington.

Benchmark: Administrative Efficiency

RCW 47.01.012 establishes a policy goal that WSDOT's administrative costs as a percentage of transportation spending should fall into the lowest 25 percent ("most efficient quartile") among all 50 states. The Transportation Commission has incorporated this suggested benchmark for national comparison and established an internal administrative cost benchmark for WSDOT.

WSDOT's Benchmark

WSDOT's *internal* administrative benchmark reflects the agency's administrative cost in relation to its total expenditures. For FY 2002, WSDOT's administrative allocation was 3.8 percent — $59,862,950 of the agency's total expenditures of $1,568,546,491.

National Comparisons

For national comparison, WSDOT uses the Federal Highway Administration's (FHWA) annual *Highway Statistics* report, which compiles expenditure and performance information from the states. To develop a benchmark, the Transportation Commission and WSDOT referred to FHWA's guidance and *Item A.4.a. General administration and miscellaneous expenditures*.

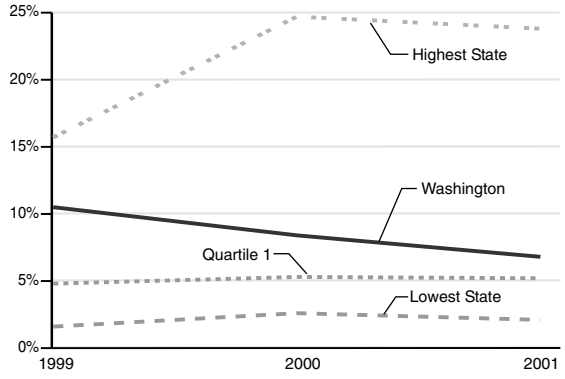
State DOTs use different methods to track and report data to FHWA and differ widely in structure and function. For example, some state transportation departments include driver licensing, which in Washington is part of the Department of Licensing (DOL). Some states report lower administrative costs than WSDOT by allocating certain expenses to specific projects and excluding miscellaneous non-DOT expenses from their administrative cost reports. Other states generally also include information from non-DOT transportation agencies in their FHWA reports, but the mix is inconsistent and may include law enforcement, safety, interest payments, and bond retirement.

WSDOT's national benchmark compares each state's reported *A.4.a.* administrative cost to the total of that state's capital outlay, maintenance, and operations expenditures (core functions of a state department of transportation.). The table at right shows that using this national comparison, Washington ranks as the 21st lowest state with 6.8 percent administrative costs for 2001.

In past years, WSDOT included administrative costs for other transportation agencies, such as the County Road Administration Board and DOL, in FHWA administrative cost reports. Following FHWA guidance, some of these non-WSDOT costs will be moved out of *A.4.a.* in WSDOT's FY 2002 report.

Washington Administrative Cost Target

Percent of Capital Outlay, Maintenance, and Operations Expenditures, 1999-2001



This chart shows Washington's nationally-reported administrative cost percentage for 1999, 2000, and 2001. Washington is showing progress toward meeting the first quartile target set by the Legislature in 2002. The agency has moved from the top of the last quartile for 1999 to the middle of the second quartile for the 2001 report, at 6.8%.

Source: WSDOT analysis of FHWA data.

A number of variables affect administrative costs from year to year. Increases or decreases in the size of the WSDOT construction program affects the percentage of administrative costs compared to total agency cost. In addition, the costs of services provided by other state agencies have been increasing in recent years. Most of these services are mandatory and beyond WSDOT's control. Self-insurance costs continue to increase dramatically.

2001 National Administrative Cost Comparison

State	Admin. Percent	Rank
Colorado	2.1%	1
Arkansas	2.2%	2
Indiana	2.4%	3
Wyoming	2.7%	4
New Mexico	2.8%	5
Kentucky	3.0%	6
Missouri	3.2%	7
Pennsylvania	3.9%	8
Maine	4.2%	9
Maryland	4.5%	10
West Virginia	4.6%	11
Florida	4.8%	12
Iowa	5.1%	13
Alabama	5.2%	14
Georgia	5.6%	15
Michigan	5.6%	16
Virginia	5.9%	17
Alaska	6.5%	18
Idaho	6.6%	19
New York	6.7%	20
Washington	**6.8%**	**21**
New Hampshire	6.8%	22
Illinois	6.9%	23
North Carolina	6.9%	24
Kansas	7.0%	25
Median	**7.2%**	
Texas	7.5%	26
Vermont	7.5%	27
Mississippi	8.2%	28
Massachusetts	8.3%	29
Oklahoma	8.3%	30
Nevada	8.6%	31
Minnesota	8.8%	32
South Carolina	8.9%	33
Oregon	9.1%	34
Utah	9.1%	35
South Dakota	9.2%	36
Delaware	9.5%	37
Rhode Island	9.8%	38
Nebraska	9.9%	39
Tennessee	10.3%	40
Ohio	10.6%	41
Wisconsin	11.6%	42
Connecticut	11.8%	43
New Jersey	12.2%	44
California	13.0%	45
Montana	13.8%	46
Arizona	16.0%	47
North Dakota	16.6%	48
Louisiana	23.4%	49
Hawaii	23.8%	50

Source: WSDOT analysis of FHWA data.

Benchmark: Transit Efficiency

RCW 47.01.012 also requires the Washington State Transportation Commission to establish a cost efficiency benchmark for the state's public transit agencies.

To address this mandate, the Commission's Benchmark Committee worked with the Washington State Transit Association (WSTA). WSTA proposed the following four measures that address cost efficiency, cost effectiveness, and service effectiveness.

- Operating cost per total hour
- Operating cost per passenger mile
- Boardings per revenue hour
- Operating cost per boarding

Efficiency and effectiveness measures evaluate the ability of a transit agency to provide service and meet the demand for transit services given existing resources.

Distinguishing between different types of services and system sizes is essential for valid benchmarking. The four adopted benchmarks compile statewide averages for fixed-route (scheduled) service at urban, small urban, and rural transit agencies, and statewide averages for demand response (on-call paratransit) and vanpool services. The performance of individual systems can be compared to these benchmarks.

The results for six urban transit systems are used below to highlight the differences that exist between systems. The six systems are Community Transit (CT), Clark County (C-TRAN), King County's Metro Transit Division, Everett Transit, Pierce Transit, and Spokane Transit Authority.

For more information about transit in Washington, see WSDOT's Annual Summary of Public Transportation Systems. *The latest summary is available at* www.wsdot.wa.gov/transit/library/2001_summary/2001_summary.cfm.

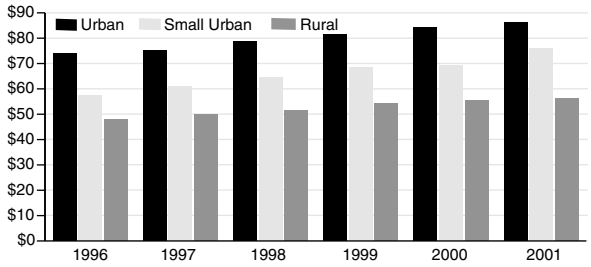
Operating Cost Per Total Hour: Cost Efficiency

Costs are related to the size of the transit system and the nature of the area served. Larger transit systems are more complex and incur costs for fixed facilities (transit centers, park and ride lots, etc.), security, and other costs that smaller systems do not have. They also operate larger equipment in metropolitan areas with higher wages.

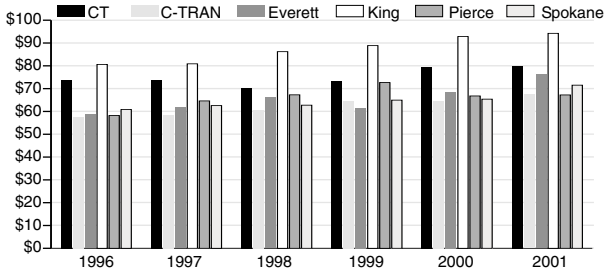
The average cost per hour for the rural and urban systems increased approximately 17% from 1996 to 2001, in line with inflation over this period. Average cost per hour for the small urban systems increased at a higher rate (31.9%). This appears to be due to significant service reductions by these systems in 2000 and 2001, resulting in fixed costs being spread over fewer service hours.

The highest costs in urban transit systems are experienced by King County Metro. Metro operates a fleet of articulated and electric trolley buses as well as the bus tunnel, park-and-ride lots, and numerous other fixed facilities.

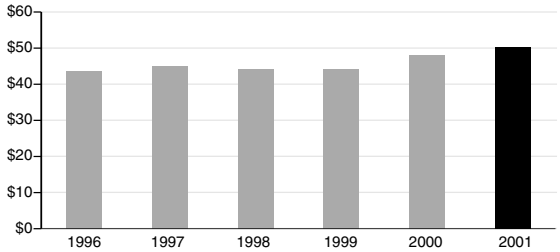
Average Fixed Route Cost per Total Hour
Washington State Average by Transit System Size, 1996-2001



Fixed Route Cost per Total Hour for Six Systems
Six Urban Transit Systems in Washington, 1996-2001



Demand Response Service: Average Cost per Total Hour
Washington State Average for All Transit Systems, 1996-2001



The statewide average cost for demand response service is significantly lower than the fixed-route average cost. This is primarily due to the lower wage rates of demand response drivers. First, this service is contracted out by many systems to private or private non-profit agencies, who often pay less in wages and benefits than the public systems. Second, some transit systems pay their demand response drivers a lower compensation than their fixed-route drivers.

Boardings Per Revenue Hour: Service Effectiveness

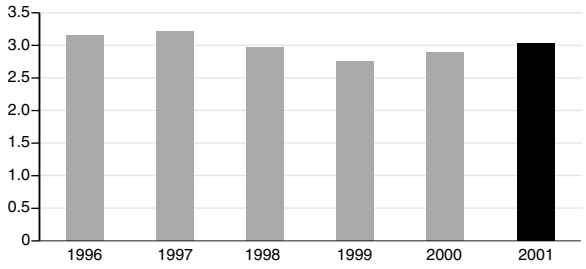
Boardings per revenue hour are the number of passenger boardings for every hour a transit vehicle is transporting passengers. This measure increases with population density and the type of service — urban local service, for example, shows higher boardings per revenue hour than express service.

Performance has been relatively constant for the urban and small urban systems but has dropped among rural systems. The loss of both sales tax equalization and Motor Vehicle Excise Tax funding and the general economic downturn in rural Washington has forced rural systems to reduce service levels and increase fares, resulting in fewer passengers while spreading fixed costs over fewer hours of service.

King County Metro, with more than 30 boardings per revenue hour, exceeds the other urban systems in this measure. C-TRAN has seen this measure decline as a function of the increase of express service in its service mix.

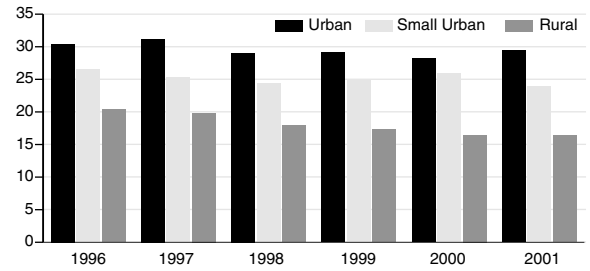
Demand Response Service: Average Boardings per Revenue Hour

Washington State Average for All Transit Systems, 1996-2001



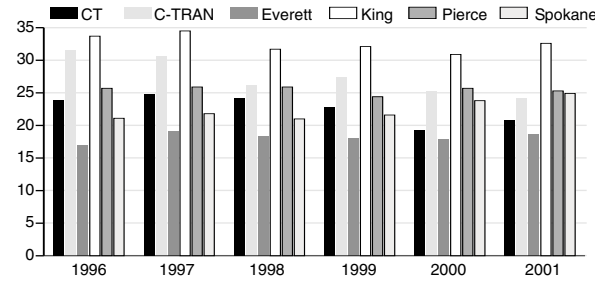
Average Fixed Route Boardings per Revenue Hour

Washington State Average by Transit System Size, 1996-2001



Fixed Route Boardings per Revenue Hour for Six Systems

Six Urban Transit Systems in Washington, 1996-2001



Increases in this measure for demand response service since 1999 are related to service area reductions and the elimination of the least productive services by some transit agencies. As these least productive services, usually serving low-density suburban or rural areas, are eliminated, the associated demand response service is also discontinued. Demand responsive trips in these areas tend to have long trip lengths and are difficult to group with other rides.

Operating Cost Per Passenger Mile: Cost Effectiveness

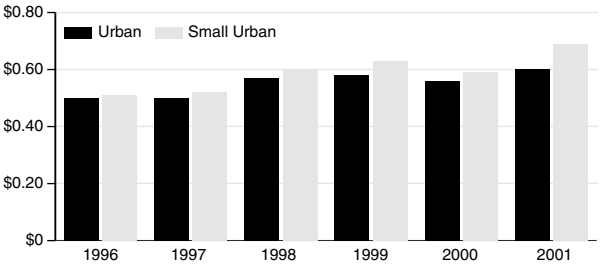
Passenger miles are the transit parallel to vehicle miles traveled. Passenger mile information is not collected for rural systems. Also, this measure does not apply to demand response service.

The trend for this measure generally reflects inflationary cost increases. The cost per passenger mile increased sharply for small urban systems from 2000 to 2001 due to significant service reductions and fare increases during 2000 by several systems in this category.

The chart illustrates the low cost per passenger mile rate of Community Transit — a system with a high level of express service — while Everett Transit, a system with little express service and short average trip length, has a higher cost per passenger-mile. Spokane's cost per passenger-mile reflects its lack of an extensive express route system such as those operated by the Puget Sound area systems.

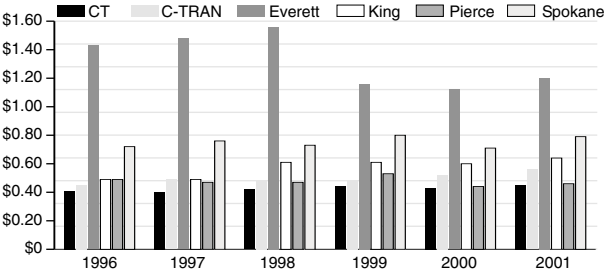
Average Fixed Route Cost per Passenger Mile

Washington State Average by Transit System Size, 1996-2001



Fixed Route Cost per Passenger Mile for Six Systems

Six Urban Transit Systems in Washington, 1996-2001



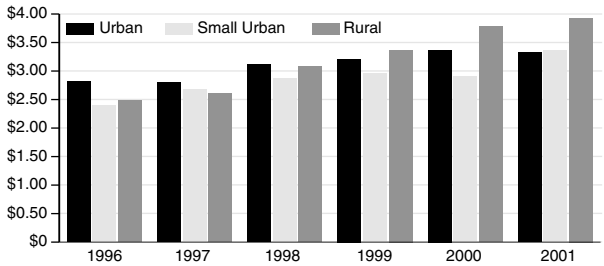
Operating Cost Per Boarding: Cost Effectiveness

Operating cost per boarding measures the cost of carrying one passenger on a single bus trip. An important consideration is that passenger trips can vary greatly in distance. On some systems the average trip length is three miles. On other systems the average trip length is 11 miles. It is reasonable to expect that the latter system would have a higher cost per boarding. Rural transit service will generally be more expensive on a per passenger basis than urban service, largely due to lower population densities and longer trip lengths.

The cost has increased per boarding at approximately the rate of inflation for urban systems, while rural and small urban systems have seen the cost per boarding increase at a much higher rate. Small urban systems saw a significant increase from 2000 to 2001 because service reductions increased the cost per hour of service; also, increased fares led to fewer passengers. Rural systems faced these issues as well, and their cost effectiveness in this measure was hit particularly hard by increased health care and other employee costs.

Average Fixed Route Cost per Boarding

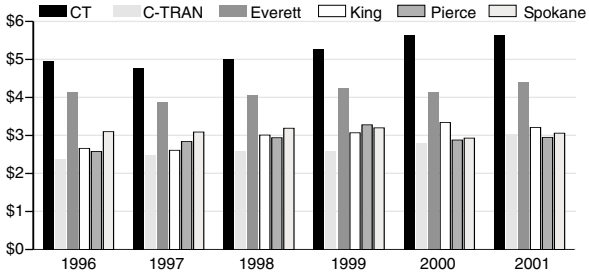
Washington State Average by Transit System Size, 1996-2001



This chart illustrates the effect of the type of service on cost per boarding and the limitations of using a single measure to determine the effectiveness of a transit system. Community Transit has a significantly higher cost per boarding than other systems due to the high level of express service it operates. Express service experiences fewer boardings per hour than local service but has much longer trip lengths. Despite the high cost per boarding, Community Transit has the lowest cost per passenger mile of any of the urban systems. The overall cost per boarding has been held relatively constant over this period among the large urban systems.

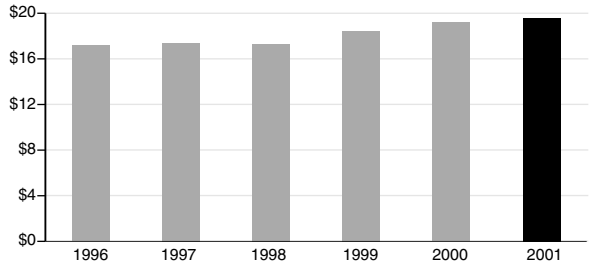
Fixed Route Cost per Boarding for Six Systems

Six Urban Transit Systems in Washington, 1996-2001



Demand Response Service: Average Cost per Boarding

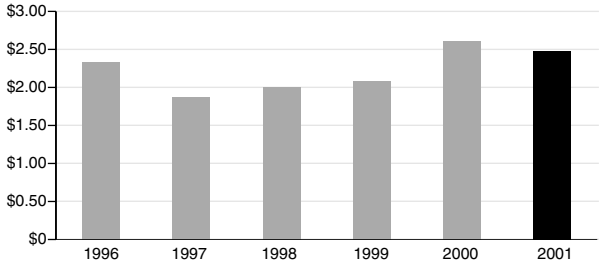
Washington State Average for All Transit Systems, 1996-2001



The cost per boarding for demand response service is approximately six times the cost per boarding for fixed-routes service. This measure was constant from 1996 to 1998 with costs increasing due to inflation and increased employee costs since 1999.

Vanpool Service: Average Cost per Boarding

Washington State Average for All Transit Systems, 1996-2001



Operating cost per boarding is the only statewide benchmark for vanpool service. The cost-effectiveness of the vanpool program is particularly impressive, considering average trip lengths and that vanpool passenger fares cover a substantial portion of the program's operating and capital costs in many systems. Some systems choose to subsidize vanpool fares to make the service as attractive as possible.

Benchmark: Vehicle Miles Traveled Per Capita

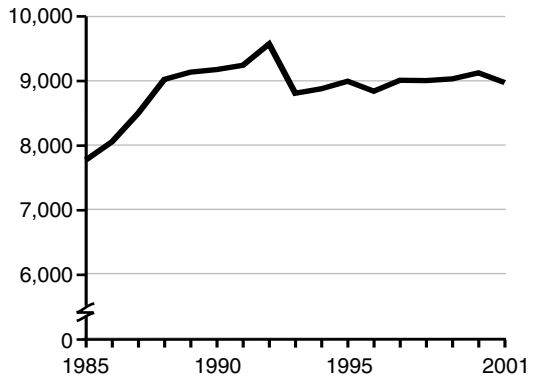
RCW 47.01.012 requires tracking the state's vehicle miles traveled (VMT) per capita, with a goal that it be maintained at 2000 levels. In 2000, the state's population traveled 9,133 vehicle miles per person on all roadways.

The chart shows that VMT per capita dipped below the 2000 level in 2001 to 8,982 miles per person — a decline of 1.7 percent. In the last twenty years, VMT has grown faster than the population (Washington's population has grown about 40 percent, while VMT has grown 60 percent). However, since the late 1980s, VMT per capita in Washington state has hovered very close to 9,000 miles per person per year (the apparent drop from 1992 to 1993 is actually due to a change in the way VMT is calculated)*. Statistics for 2002 will be available in July 2003.

Washington has less vehicle travel per capita than most other states, ranking 41st highest in 2001.

Washington State Travel Growth

*Annual Vehicle Miles Traveled per Capita, 1985 to 2001**



** Vehicle miles traveled for 1993 and later years reflects a change in VMT data calculation, accounting for the drop from 1992 to 1993.*

Source: WSDOT Transportation Data Office.

2001 VMT per Capita by State

Rank	State	VMT per Capita
1	Wyoming	17,445
2	Vermont	15,686
3	Georgia	12,870
4	Alabama	12,716
5	New Mexico	12,701
6	Mississippi	12,592
7	Oklahoma	12,580
8	Missouri	12,013
9	Tennessee	11,783
10	Indiana	11,713
29	Texas	10,139
30	Michigan	9,908
31	Oregon	9,905
32	New Hampshire	9,780
33	Colorado	9,723
34	Maryland	9,673
35	Arizona	9,583
36	Florida	9,494
37	Ohio	9,372
38	Louisiana	9,221
39	California	9,006
40	Connecticut	9,005
41	**Washington**	**8,962**
42	Nevada	8,693
43	Pennsylvania	8,383
44	Massachusetts	8,310
45	Illinois	8,255
46	New Jersey	8,100
47	Rhode Island	7,546
48	Alaska	7,436
49	Hawaii	7,101
50	New York	6,876

Note: The slight difference between the results for Washington by WSDOT's Transportation Data Office (at left) and this table reflect data adjustments by FHWA.

Source: Federal Highway Administration and the U.S. Department of Commerce.

***How VMT is Calculated**

Statewide VMT is based on sample data gathered and reported for the Highway Performance Monitoring System (HPMS).

VMT is estimated for the non-sampled mileage. In 1991, new federal legislation required a complete system inventory as the Federal Aid highway system changed and the National Highway System (NHS) was created. At the same time, HPMS data reporting increased to include all principal arterials and NHS routes. This additional data allowed actual calculations on mileage that had been estimated in previous years.

For 1993, the first reporting year for HPMS which reflected the system re-inventory and NHS, the VMT was more accurate than had been possible in the past. Current annual VMT calculations are based on more actual data than was available before 1993, since the calculations now include the total principal arterial mileage and NHS.

Special Features

Hot Mix Asphalt Pavement Delivery Update

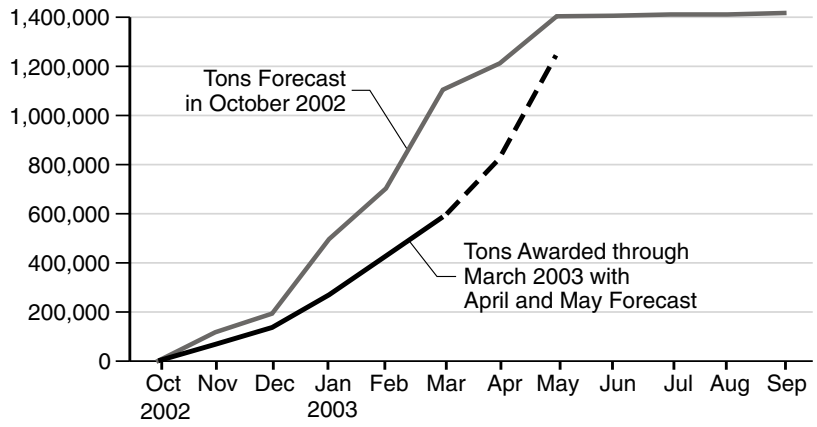
In October of 2002, WSDOT forecasted that 1,417,126 tons of Hot Mix Asphalt (HMA) would be awarded to contractors from October 2002 through September 2003. During the first six months, October 2002 through March 2003, 63 projects were forecast to be awarded with a combined total of 1,104,753 tons of HMA.

Tons of HMA awarded has not kept up with the forecast. The actual tally at the end of March is 43 projects awarded with 587,182 tons of HMA. This trails the forecast by 517,571 tons. The reduction of awarded projects and consequently the reduction of tons of HMA awarded are in part related to highway construction program advertisement delays (see details on "Meeting WSDOT's Scheduled Advertisement Dates" on page 3 of this edition).

The gap between forecast and actual tons awarded is projected to catch up in the coming months. By the end of May the gap should be reduced by about two thirds as the number of tons awarded should be within approximately 150,000 tons of the forecast. The final October tally of tons awarded is anticipated to be very close to the forecast.

In previous editions of the Gray Notebook*, this item has been referred to as Asphalt Concrete Pavement Delivery. The name change brings WSDOT in line with terminology used by other state DOTs.*

Hot Mix Asphalt Pavement Tons
Projected and Awarded Tons Delivered
October 2002 through March 2003



Source: WSDOT Construction Office.

Innovative and Cost Effective Maintenance Practices: Living Snow Fence Planted on State Route 25

This spring the WSDOT Davenport Maintenance Area and the U.S. Department of Agriculture's Natural Resource Conservation Service joined forces to plant a "Living Snow Fence" adjacent to State Route (SR) 25 in Lincoln County. Blowing and drifting snow creates hazardous conditions and increases maintenance costs. Sometimes drifting snow even causes miles of roadways to be closed. Snow fences reduce these impacts. The living snow fence, made of plant materials such as grasses, shrubs and trees, effectively reduces snow drifts. The snow fence is 800 feet long and consists of twin staggered rows of Rocky Mountain juniper trees, growing through a fabric mulch material that will control weeds and keep moisture in the ground. More than 500 trees were planted. The live fence should be fully effective in 5 to 7 years. Another approach is a temporary (plastic) snow fence that was installed this year on SR 547 near Sumas. The Bellingham maintenance operations superintendent reported, tongue-in-cheek: "It did a great job of keeping snow off the road! It didn't snow."

State Route 25: Davenport Maintenance Superintendent Dale Luiten walks behind the equipment tamping down the soil around the little trees.

On the planting machine feeding the little trees into the mechanism is Maintenance Lead Tech Tom Page. Rocky Mountain juniper trees with good site preparation will grow one foot a year.

Highlights of Program Activities

Quarter Ending March 31, 2003

Project Starts, Completions, Updates

- The Puget Sound Regional Council of Governments contributed $1.2 million toward planning activities and environmental studies of the Alaska Way Viaduct and seawall in Seattle. These funds, along with $2 million secured by Sen. Patty Murray and $5 million committed by the City of Seattle, prevented a shut down of the project at the end of the year. The project needs at least $15 million more to finish the environmental analysis and select the best option for the project. Substantial additional funding is required for further design and construction. For more information, visit the project website at: *www.wsdot.wa.gov/projects/viaduct*.
- Crews began deck replacement for the 73-year old Lewis & Clark Bridge, on State Route (SR) 433 between Longview, Washington, and Rainier, Oregon. The contractor for the project, Max J. Kuney Company, submitted a bid $10.8 million below the engineer's estimates, a potential saving of $5.4 million each for Washington and Oregon taxpayers. The bridge will be closed some nights and weekends during construction. Project information is available on the Web at *www.wsdot.wa.gov/projects/lewisclarkbridge*. The project is scheduled for completion in December 2004.

Lewis and Clark Bridge

- The first half of the I-90 Sunset Way Interchange opened to traffic in January. Two new roadways and a new ramp from Sunset Way to westbound I-90 provide much needed access to the Sammamish Plateau, Issaquah Highlands, and the new Microsoft Campus. This is one of three separate, but interrelated projects being constructed. The full interchange is scheduled for completion in August 2003.
- A new ramp opened from Interstate 405 to SE 8th Street in Bellevue, two months ahead of schedule. The project is part of a series of projects, called Access Downtown, to improve access to Bellevue along the I-405 corridor. The new elevated-ramp will draw drivers away from other heavily used interchanges at NE 4th and NE 8th Streets. Project partners include the City of Bellevue, Sound Transit, Federal Highway Administration and WSDOT.

New ramp on I-405, Bellevue

- A project to reconstruct a section of Interstate 5 in Bellingham that was delayed a year due to higher than acceptable contractors' bids, was successfully re-advertised, with bids coming in nearly $1 million less than the lowest bid received a year ago. The $6.9 million project will improve I-5 between Samish Way and Sunset Drive (State Route 542). Work begins this spring.
- The U.S. 12 Wishkah Bridge in Aberdeen was reopened to traffic after a 35-day complete closure. A detour was in place while the steel grate bridge deck was removed and rebuilt. The pedestrian walkways, maintenance ladders, steps and platforms were also replaced, and the bridge has been strengthened for resistance to seismic forces.
- Workers will begin installing advance-warning beacons at three intersections on U.S. 2 and U.S. 97 between Cashmere and Leavenworth this spring with a goal of completing the project before the summer tourist season. The beacons increase safety by alerting motorists that they are approaching a signalized intersection. Locations of the beacon systems are at the Cotlets Street and Aplets Street intersections with U.S. 2 & 97 in Cashmere, and at the Main Street intersection with U.S. 2 at Peshastin.
- With limited ability to expand major corridors, making the most efficient use of existing pavement is critical. For this reason, the Transportation Commission changed a long-standing policy by implementing WSDOT recommendations to open some Central Puget Sound freeway high-occupancy-vehicle (HOV) lanes to all users from 7 p.m. to 5 a.m. as a two-year demonstration project, and to explore allowing single drivers to buy into under used HOV lanes during the day (known as HOT lanes). The goal is to improve the usage of these HOV lanes, while not harming transit or carpool travel times. The nighttime opening will be implemented by late summer, while a HOT lane proposal will be developed by fall 2003.

- The HOV Pilot Project in Vancouver was extended for another 24 months, following a careful review of four evaluation reports compiled between October 31, 2001 and October 31, 2002. The reports indicated that between July 2002 and October 2002 the number of people in the HOV lane jumped from 70 percent of those in the general-purpose lanes to 90 percent. WSDOT's decision took into consideration the recommendations of the Southwest Regional Transportation Council, C-Tran's Board, the Port of Vancouver, and a national HOV lane peer review panel.

Legal matters

- The U.S. Army Corps of Engineers fined WSDOT and its contractor, Kiewit Construction Company, for violations of the Federal Clean Water Act, stemming from work on the I-90 Sunset Interchange in Issaquah. A $25,000 civil penalty was assessed to each party for conducting unapproved work in sensitive waters within the work zone. WSDOT cooperated fully during the Corps investigation and was already implementing a new environmental compliance process to prevent similar occurrences in the future.

Savings and Efficiencies

- WSDOT's digital production of aerial photography images is more efficient since switching from Digital Linear Tape technology to Digital Video Disc (DVD). The old technology required considerable time to transfer images to tape, due to the large file size. As an example, a transfer of five images was a nearly two-hour process. With the DVD technology, the same data can now be transferred in 30 minutes. The result is lower production costs and faster delivery of products to WSDOT's clients.

Innovations and Awards

- Kim Willoughby, Pavement Structures Engineer for WSDOT's Materials Lab in Tumwater, was part of a multi-agency team honored with the K.B. Woods Award by the Transportation Research Board in Washington, D.C. The K.B. Woods award is given annually for the best research paper in the area of design and construction of transportation facilities. Willoughby's team demonstrated the feasibility of an online web database for monitoring the lifetime performance of hot-mix asphalts.
- WSDOT's Tacoma Project Office earned an honorable mention in the state's "Partnership for Excellence Contract Administration" award program for its work in administering the City of Tacoma's Museum of Glass Bridge project. The annual awards, sponsored by WSDOT and the Associated General Contractors of Washington, recognize achievements in Contractor-WSDOT partnerships that result in the delivery of transportation projects in a timely, professional and responsive manner.

New WSDOT Information Sources

- WSDOT introduced a new handbook, *Building Projects that Build Communities*, to help local agencies and WSDOT deliver successful transportation projects. The handbook implements the Context Sensitive Solutions initiative which encourages partnering to develop a transportation facility that fits its surroundings and preserves scenic, aesthetic, historic, and environmental resources and community values, while maintaining safety and mobility. *Building Projects that Build Communities* was distributed to all public transportation agencies in the state and is available on-line at *www.wsdot.wa.gov/biz/csd*.

Grants Received and Grants Awarded

- Federal and State transportation grants of over $1 million helped pay for safety improvements on Irondale Road, between SR 19 and SR 16 north of Port Hadlock in Jefferson County. The roadway shoulder was widened to improve sight distance for motorists and provide a safer area for bicyclists and pedestrians.

Special Events

- WSDOT's Aviation Division hosted the annual Aviation Hall of Fame Awards banquet during the 20th annual Northwest Aviation Conference and Trade Show in Puyallup. Aviation Director John Sibold presented a number of awards, including Airport of the Year, Airport Manager of the Year, and Airport Volunteer of the Year. The conference drew over 10,000 participants and provided an opportunity for pilots to register with the Aviation Division.
- Tribal Employment Rights Office (TERO) Conferences were held in Lakewood and Spokane, with contractors, tribal representatives, union representatives, and state and federal transportation officials attending. The meetings were to draw attention to tribal employment rights when construction contracts are within reservation lands.

Gray Notebook Subject Index

Edition Key: **1** = Quarter 1 2001, **2** = Quarter 2 2001, **3** = Quarter 3 2001, **4** = Quarter 4 2001, **5** = Quarter 1 2002, **6** = Quarter 2 2002, **7** = Quarter 3 2002, **8** = Quarter 4 2002, **9** = Quarter 1 2003

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Americans with Disabilities Act (ADA) Information

Persons with disabilities may request this information be prepared and supplied in alternate formats by calling the Washington State Department of Transportation ADA Accommodation Hotline collect (206) 389-2839. Persons with hearing impairments may access Washington State Telecommunications Relay Service at TTY 1-800-833-6388, Tele-Braille 1-800-833-6385, Voice 1-800-833-6384, and ask to be connected to (360) 705-7097.

Civil Rights Act of 1964, Title VI Statement to Public

Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Persons wishing information may call the WSDOT Office of Equal Opportunity at (360) 705-7098.

Other WSDOT Information Available

The Washington State Department of Transportation has a vast amount of traveler information available (including Puget Sound area traffic, mountain pass reports, highway closures, ferry schedules, and more). Call the WSDOT statewide toll-free number: *1-800-695-ROAD.* In the Seattle area: (206) DOT-HIWY [368-4499].

For additional information about highway traffic flow and cameras, ferry routes and schedules, Amtrak *Cascades* rail, and other transportation operations, as well as WSDOT programs and projects, visit *www.wsdot.wa.gov*

For this or a previous edition of the *Gray Notebook*, visit *www.wsdot.wa.gov/accountability*

0303-0080

Appendix K
The Commuter Choice Leadership Initiative and Best Workplaces for Commuters

EPA United States Environmental Protection Agency

U.S. Department of Transportation

Best Workplaces for Commuters

Regional Highlights

About the Campaign

Denver/Boulder

Greater Washington Region

Houston

New England

Sacramento Region

San Francisco Bay Area

Greater Tucson Area

Search

Go

Advanced Search

PDF files must be downloaded and viewed with the free Adobe Acrobat Reader 5.0.

San Francisco Bay Area's Best Workplaces for Commuters℠

EPA is partnering with employers, local and regional government agencies, and community and environmental groups to improve the quality of life in the Bay Area. Read below to find out how, or review some facts about traffic and air quality in the Bay Area to learn why.

Get on the list!

If you have not already applied for The Bay Area's Best Workplaces for Commuters℠ 2003 list, be sure to apply by September 12, 2003, to be recognized by Bay Area media in late October.

2003 BEST Workplaces for Commuters℠ Bay Area

The media has already shown interest in the 2003 list in advance of the fall announcement. Check out "New program boosts commuter choices," EXIT East Bay Business Times, June 23, 2003.

2003 Media Materials

Media Release (PDF - 245 KB)
Preliminary 2003 Best Workplaces for Commuters List (PDF - 197 KB)
Backgrounder on Coalition
(PDF - 277 KB)
Fast Facts (PDF - 279 KB)

Click here to review all of the impressive newsprint and television media coverage from the 2002 campaign, including a TV spot on KRON 4 TV.

EPA Welcomes Best Workplaces for Commuters Districts

EPA is excited to announce California's first ever Best Workplaces for Commuters Districts: Bishop Ranch and Hacienda Business Parks. These districts offer comprehensive commuter benefits packages that meet the *National Standard of Excellence* to all employers and their employees located within the business parks.

Media Release (PDF - 223 KB)

Districts Media Results

The Bay Area's Best Workplaces for Commuters

On October 24, 2002, The Bay Area's Best Workplaces for Commuters Coalition recognized 84 employers for being placed on the first-ever list of The Bay Area's Best Workplaces for Commuters. The list spotlights Bay Area employers committed to improving quality of life for harried commuters while also reducing traffic and air pollution. Click here to learn more about The Bay Area's Best Workplaces for Commuters.

Click here to learn about all the local organizations that make Best Workplaces possible.

Past Events

EPA Region 9 recognizes employers who meet the *National Standard of Excellence*. Learn more.

Strategic marketing workshops target transportation demand management professionals in the Bay Area. Learn more.

Best Workplaces for Commuters Profiles

Review the list of Best Workplaces for Commuters in the San Francisco Bay Area.

Review the list of supporting organizations in the San Francisco Bay Area.

Photo of Golden Gate Bridge courtesy of San Francisco Convention & Visitors Bureau.

EPA United States Environmental Protection Agency

U.S. Department of Transportation

Best Workplaces for Commuters

Regional Highlights

About the Campaigns

Denver/Boulder

Greater Washington Region

Houston

New England

Sacramento Region

San Francisco Bay Area

Greater Tucson Area

Search

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Advanced Search

San Francisco Bay Area Commuting Facts

The Bay Area's Best Workplaces for Commuters[SM]

- In 2002, more than 80 employers were recognized on the first annual Bay Area's Bay Area's Best Workplaces for Commuters[SM] list.
- The 150,000 commuters covered by last year's Bay Area's Best Workplaces for Commuters list will help reduce 105,000 metric tons of carbon dioxide per year, a reduction equivalent to planting 1.3 million trees each year.
- The list for 2003 is still being developed. Deadline for enrolling online is August 29, 2003. The final list will be announced to the media on October 23, 2003.

Local Commuting

- More than 3.3 million people commute each day in the Bay Area, and more than 70 percent of them drive to work alone. (Census 2000 Supplementary Survey)
- The average annual Bay Area traffic delay per capita for 2000 was 41 hours compared to 27 hours nationally. (Texas Transportation Institute)
- In total, congestion cost the Bay Area $3.2 million-$795 per person-in 2000. (Texas Transportation Institute)
- More than 11 percent of Bay Area workers commute two hours a day-one hour in each direction. (Census 2000 Supplementary Survey)
- Bay Area residents perceive traffic as the number one regional problem. (Bay Area Council's 2002 Quality of Life Survey)

Health

- Walking to work gives you a 20 percent less chance of getting breast cancer, a 30 percent less chance of getting heart disease, a 50 percent less chance of diabetes, and would help you live longer and healthier into old age. (Nurse's Health Study, Archives of Internal Medicine; New England Journal of Medicine)
- About 60 percent of Americans lead completely sedentary lifestyles, and 40 percent are clinically overweight. (1998 report of the American Medical Association)
- Research conducted in 1999 by the Centers for Disease Control found that "obesity and overweight are linked to the nation's number one killer--heart disease--as well as diabetes and other chronic conditions." The report also states that one reason for Americans' sedentary lifestyle is that "walking and cycling have been replaced by

automobile travel for all but the shortest distances." (October 27, 1999 issue of the JAMA)

Air Quality

- Almost 70 percent of the Bay Area's carbon monoxide comes from motor vehicles. (EPA Region 9; Bay Area Air Quality Management District Emissions Inventory)
- For 20 to 30 days per year, air pollution levels in the Bay Area violate state and federal health standards. (BAAQMD emissions inventory)

National Commuting

- The average annual delay per peak-road traveler in 75 urban areas climbed to 62 hours in 2000 from 16 hours in 1982. The total cost of congestion in 2000 came to $67.5 billion, which was the value of 3.6 billion hours of delay and 5.7 billion gallons of excess fuel consumed, not to mention lost worker productivity. (Texas Transportation Institute)
- Nearly 50 percent of workers describe their commutes as unsatisfying or stressful, and 36 percent say they would be willing to take a 10 percent pay cut or more for a shorter commute. (HR Magazine Survey, Oct. 2001)
- Employees with commuter benefits are 8 times more likely to use transit than those who don't have them. (2001 Xylo survey)

Why Join?
Do I Qualify?
Online Enrollment
Employer Reporting
Employer Profiles
Employer Resources
Employer FAQs

Employer Agreement

Enrollment Date: 09/26/2003

Employer Information

Employer Name:

Nature of Business:

Number of Employees (company-wide):

Recruiting Organization:

(The organization or agency that encouraged you to sign up for the program)

Primary Contact

Name: Title:

Address: City:

State: Zip:

Phone: Fax:

E-mail:

Manager

(Person who oversees administration of commuter benefits program)

☐ Same as above

Name: Title:

Address: City:

State: Zip:

Phone: Fax:

E-mail:

Media Contact

☐ Same as Primary Contact

☐ Same as Manager

Name: Title:

Address: City:

State: Zip:

Phone: Fax:

E-mail:

Work Site Information

How many work sites are you enrolling?

How many employees (total) work at the sites?

How many of these employees are eligible for commuter benefits?

Next